



Solicitation No. 01-SP-30-0080
REQUEST FOR PROPOSALS

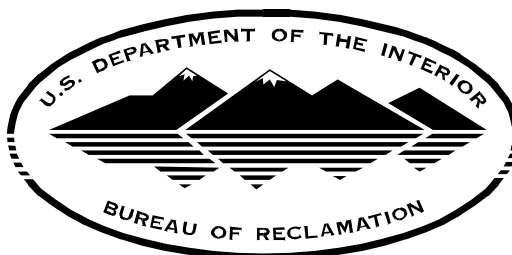
UNITS N1 and N2 PRESSURE REGULATING VALVE REHABILITATION HOOVER POWERPLANT LOWER COLORADO DAMS PROJECT, NEVADA

Volume 1 - Solicitation & Specifications

Lower Colorado Regional Office
Boulder City, Nevada

2001

United States Department of the Interior
Bureau of Reclamation



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**UNITS N1 and N2 PRESSURE REGULATING VALVE REHABILITATION
HOOVER POWERPLANT
LOWER COLORADO DAMS PROJECT, ARIZONA**

FOREWORD

The work to be performed under this solicitation is rehabilitation of the Pressure Regulating Valve (PRV) for Unit N1 at the Hoover Powerplant located near Boulder City, Nevada with an option to rehabilitate Unit N2. The powerplant contains 19 hydroelectric units. The N1 and N2 PRVs were manufactured by S. Morgan Smith. Replacement bushings, seal rings, gaskets, and packings will be required. The valve will be disassembled by the Contractor and non-embedded parts removed to an off-site facility of the Contractor for rehabilitation. The Contractor shall re-assemble all the parts of PRV after rehabilitating the PRV.

Hoover Dam is located on the Colorado River approximately 8 miles, via U.S. Highway 93, northeast of Boulder City, Nevada, in Clark County, Nevada, and Mojave County, Arizona.

It is strongly recommended that all prospective offerors make a site visit to examine the location of the work.

Prospective offerors desiring to visit the site of the work should communicate with Mr. Chuck Wiley, Lower Colorado Dams Facilities Office, Hoover Dam, Telephone: (702) 293-8314.

For the date and time of offer submission, see "Solicitation, Offer, and Award," Standard Form 1442, immediately following the "Table of Contents."

This acquisition is being procured under Federal Acquisition Regulations Part 15, Contracting by Negotiation. See the provisions in Section L that include General, Technical, and Pricing Proposal Instructions and in Section M for the Evaluation Factors for Award.

For information regarding Bureau of Reclamation's publication entitled "Reclamation Safety and Health Standards" (1993 Edition), which is applicable to work under this contract, see the clause entitled "WBR 1452.223-81, Safety and Health."

**WBR 1452.222-901 Non-Discrimination Notice to U.S. Department of the Interior
Contractors, Subcontractors, and Lessors--Bureau of Reclamation--Lower
Colorado Region (Dec 1999)**

Based upon law, Executive Order, or internal policy, the Department of the Interior prohibits discrimination in the workplace, including sexual harassment, based on race, color, national origin, sex, religion, disability, age, or sexual orientation. The Department urges its contractors, subcontractors, and lessors to develop and enforce comprehensive anti-discrimination policies for their places of work.

Section A - Solicitation/Contract Form

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. 01-SP-30-0080	2. TYPE OF SOLICITATION <div style="border: 1px solid black; padding: 2px; display: inline-block;"> <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP) </div>	3. DATE ISSUED June 25, 2001	PAGE 1	OF PAGES 221
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IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.
7. ISSUED BY		
CODE LC-3112 Bureau of Reclamation Lower Colorado Region P.O. Box 61470 Boulder City NV 89006-1470	8. ADDRESS OFFER TO If Mailed by U.S. Postal Service (USPS): Bureau of Reclamation Lower Colorado Region Attn: LC-3112 P.O. Box 61470 Boulder City NV 89006-1470 If Mailed by Other Than USPS: Bureau of Reclamation Lower Colorado Region Attn: LC-3112 400 Railroad Avenue Boulder City NV 89005	
9. FOR INFORMATION CALL:	a. NAME Beth A. Murray	b. TELEPHONE NO. (NO COLLECT CALLS) (702) 293-8581

SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS:

01-SP-30-0080—Units N1 and N2 Pressure Regulating Valve Rehabilitation, Hoover Powerplant, Lower Colorado Dams Project, Arizona

Offer will be received by the Bureau of Reclamation at the Lower Colorado Regional Office, Annex Building, Room AA-119, Nevada Highway & Park Street, Boulder City, Nevada by 3:00 p.m. local time on July 25, 2001.

Express-mailed offer should be addressed as indicated in Item 8 above. Offer mailed via the United States Postal Service should be mailed at least 5 days prior to the date the offer is due and addressed as indicated in Item 8.

Hand-carried offer should be delivered to the Bureau of Reclamation, Lower Colorado Regional Office, Nevada Highway and Park Street, Annex Building, Room AA-119, Boulder City, Nevada.

Estimated Price Range of this Project: Between \$2,000,000 and \$2,500,000

To ensure timely processing of progress payments under the contract, the designated billing office for such payments is:
Bureau of Reclamation, Lower Colorado Region Engineering Services Office, P.O. Box 61470, Attn: Mr. Bruce Moore (LC-6000), Boulder City NV 89006-1470.

Final payment under the contract will be approved by the Contracting Officer pursuant to the Prompt Payment clause in the contract after all contract settlement actions are complete. To ensure timely processing, the designated billing office for the final invoice is:
Bureau of Reclamation, Lower Colorado Region Acquisition & Assistance Office, P.O. Box 61470, Attn: Mr. Kenneth A. Miller (LC-3130), Boulder City NV 89006-1470.

11. The Contractor shall begin performance <u>within 15</u> calendar days and complete it by March 3, 2002 after receiving <input type="checkbox"/> award, <input checked="" type="checkbox"/> notice to proceed. This performance period is <input checked="" type="checkbox"/> mandatory, <input type="checkbox"/> negotiable. (See <u>clause 52.211-10.</u>)	
12a. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES," indicate within how many calendar days after award in Item 12b.) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	12B. CALENDAR DAYS 15
13. ADDITIONAL SOLICITATION REQUIREMENTS: a. Sealed offers in original and <u>(see provision WBR 1452.215-908)</u> copies to perform the work required are due at the place specified in Item 8 by <u>3:00 pm</u> local time <u>July 25, 2001</u> . If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due. b. An offer guarantee <input checked="" type="checkbox"/> is, <input type="checkbox"/> is not required. c. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference. d. Offers providing less than <u>60</u> calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.	

OFFER (Must be fully completed by offeror)

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)		15. TELEPHONE NO. (Include area code)
		16. REMITTANCE ADDRESS (Include only if different than Item 14)
DUNS No.:		
CODE	FACILITY CODE	

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirement stated in Item 13d. Failure to insert any number means the offeror accepts the minimum in Item 13d.)

AMOUNTS

**See Schedule of Prices/Costs in Section B**

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS*(The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each)*

AMENDMENT NO.												
DATE												

20a. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	20b. SIGNATURE	20c. OFFER DATE
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AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA
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24. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM 10	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO <input type="checkbox"/> 10 U.S.C. 2304(c)() <input checked="" type="checkbox"/> 41 U.S.C. 253(c)(5)
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26. ADMINISTERED BY U.S. Department of the Interior Bureau of Reclamation Lower Colorado Regional Office P.O. Box 61470 Boulder City, Nevada 89006-1470	CODE LC-3130	27. PAYMENT WILL BE MADE BY U.S. Department of the Interior Bureau of Reclamation Reclamation Service Center P.O. Box 2705 Denver CO 80235-0045	CODE D-7734
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CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

<input type="checkbox"/> 28. NEGOTIATED AGREEMENT (Contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	<input type="checkbox"/> 29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.
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30a. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)	31a. NAME OF CONTRACTING OFFICER (Type or print)
30b. SIGNATURE	31b. UNITED STATES OF AMERICA
30c. DATE	31c. DATE
	BY

STANDARD FORM 1442 (REV. 4-85) BACK

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L.3	52.211-3	Availability of Specifications Not Listed in the GSA Index of Federal Specifications, Standards and Commercial Item Descriptions (Jun 1988)	L-2
L.4	52.222-23	Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity for Construction (Feb 1999)	L-3
L.5	1452.215-71	Use And Disclosure of Proposal Information--Department of the Interior (Apr 1984)	L-4
L.6	WBR 1452.215-80	Source Evaluation and Selection Procedures-- Bureau of Reclamation (Sep 2000)	L-6
L.7	WBR 1452.215-81	General Proposal Instructions--Bureau of Reclamation (Jan 1998)	L-8
L.8	WBR 1452.215-82	TECHNICAL PROPOSAL INSTRUCTIONS -- BUREAU OF RECLAMATION (JAN 1998) ALTERNATE I (APR 2001)	L-10
L.9	WBR 1452.215-83	Pricing Proposal Instructions--Bureau of Reclamation (Jan 1998)	L-13
L.10	1452.215-914	Period for Acceptance of Offer--Bureau of Reclamation-- Lower Colorado Region (Mar 2000)	L-14
L.11	52.216-1	Type of Contract (Apr 1984)	L-14
L.12	52.225-10	Notice of Buy American Act/Balance of Payments Program Requirement-- Construction Materials (Feb 2000)	L-14
L.13	52.233-2	Service of Protest (Aug 1996) Department of the Interior (Jul 1996) (Deviation)	L-16
L.14	WBR 1452.233-80	Agency Procurement Protests--Bureau of Reclamation (Sep 1997)	L-16
L.15	WBR 1452.233-82	Notice of Proposed Partnering--Bureau of Reclamation (May 1994)	L-17
L.16	52.236-27	Site Visit (Construction) (Feb 1995)	L-17
L.17	WBR 1452.236-85	Instruction for Mobilization and Preparatory Work Schedule Line Item -- Bureau of Reclamation (May 2000)	L-17
L.18	52.252-5	Authorized Deviations in Provisions (Apr 1984)	L-18

SECTION M - EVALUATION FACTORS FOR AWARD
(This section will be removed from the contract document)

M.1 Solicitation Provisions Incorporated by Reference
1452.225-82 Notice of Trade Agreements Act Evaluations–Bureau of Reclamation (Jun 2000) M-1

M.2 WBR 1452.214-909 Basis for Award-Options–Bureau of Reclamation-Lower Colorado Region (Jun 2001) M-1

M.3 WBR 1452.215-87 Evaluation Factors for Award-Quality and Cost/Price Approximately Equal-Bureau of Reclamation (Apr 2001) Alternate I (Apr 2001) M-1

M.4 WBR 1452.225-900 Evaluation of Construction Materials Under the Buy American Act–Bureau of Reclamation--Lower Colorado Region (Feb 2000) M-4

PART I - THE SCHEDULE

SECTION B - THE SCHEDULE

B.1 WBR 1452.214-908 The Requirements–Bureau of Reclamation–Lower Colorado Region (Nov 1996)

(a) The Contractor shall furnish the items identified in this Section, in accordance with the terms, conditions, and specifications contained in the contract.

(b) Offerors should carefully review the offer submission requirements contained in Section L.

(c) Offers will be considered for award on the Schedules in Paragraph B.2, but no offer will be considered for award for only a part of the Schedules.

(d) Offerors shall complete the offer schedules in Section B and furnish any additional information required in Section B, as applicable.

B.2 Schedules

Schedule A Rehabilitate Pressure Regulating Valve (PRV)			
ITEM	WORK OR MATERIAL	QUANTITY AND UNIT PRICE	AMOUNT
1A	Mobilization and Preparatory Work	for the lump sum of	\$_____
2A	Pre-Shutdown Activities	for the lump sum of	\$_____
3A	Pre-Shutdown measurements	for the lump sum of	\$_____
4A	Disassembly of PRV	for the lump sum of	\$_____
	Furnishing and Final Machining Critical Replacement Components items		
5A.1.f	Furnish - Bushing, lower piston, control valve piston 1750-HP-1 item 387	for the lump sum of	\$_____
5A.1.m	Final machining (option) - Bushing, lower piston, control valve piston 1750-HP-1 item 387	for the lump sum of	\$_____
5A.2.f	Furnish - Seat for lower piston, control tip 1750-HP-1, item 383	for the lump sum of	\$_____
5A.2.m	Final machining (option) - Seat for lower piston, control tip 1750-HP-1, item 383	for the lump sum of	\$_____

5A.3.f	Furnish - Seal for lower piston, control valve 1750-HP-1, item 381	for the lump sum of	\$_____
5A.3.m	Final machining (option)- Seal for lower piston, control valve 1750-HP-1, item 381	for the lump sum of	\$_____
5A.4.f	Furnish - Bushing, cyl. Head to upper plunger 1750-HB-1 item 336	for the lump sum of	\$_____
5A.4.m	Final machining (option) - Bushing, cyl. Head to upper plunger 1750-HB-1 item 336	for the lump sum of	\$_____
5A.5.f	Furnish - Pilot piston bearing to lower plunger 1705-GW-1 item 268	for the lump sum of	\$_____
5A.5.m	Final Machining (option) - Pilot piston bearing to lower plunger 1705-GW-1 item 268	for the lump sum of	\$_____
5A.6.f	Furnish - Cylinder head to supply pipe 1705-HB-1 item 359	for the lump sum of	\$_____
5A.6.m	Final Machining (option) - Cylinder head to supply pipe 1705-HB-1 item 359	for the lump sum of	\$_____
5A.7.f	Furnish - Crosshead Pin, 1705-HJ-1, item 510	for the lump sum of	\$_____
5A.7.m	Final Machining (option)- Crosshead Pin, 1705-HJ-1, item 510	for the lump sum of	\$_____
5A.8.f	Furnish - Sleeve, 1705-GV-1, item 252	for the lump sum of	\$_____
5A.8.m	Final Machining (option) - Sleeve, 1705-GV-1, item 252	for the lump sum of	\$_____
5A.9	Furnish Split Gland, 1705-HB-1, item 341	for the lump sum of	\$_____
5A.10	Furnishing and final machining new stainless steel components, two seat rings, apron ring, discharge ring and fasteners. (Items 10-14)	for the lump sum of	\$_____
5A.11	Furnishing two reclose springs and miscellaneous renewable parts for the dashpot controls. (Items 15 &16)	for the lump sum of	\$_____
6A	Rehabilitation of Control Valve	for the lump sum of	\$_____
7A	Rehabilitation of PRV Operating Linkages	for the lump sum of	\$_____
8A	Rehabilitation of Dashpot	for the lump sum of	\$_____
9A	Rehabilitation of Piston and Cylinder Head of the PRV	for the lump sum of	\$_____

	Rehabilitation of the Body of the PRV		
10A.1	Zone A	for the lump sum of	\$_____
10A.2	Zone B	for the lump sum of	\$_____
10A.3	Zone C	for the lump sum of	\$_____
10A.4	Zone D	for the lump sum of	\$_____
10A.5	Zone E	for the lump sum of	\$_____
10A.6	Zone M	for the lump sum of	\$_____
	Rehabilitation of Main Piston (Lower) and seal Ring		\$_____
11A.1	Zone F	for the lump sum of	\$_____
11A.2	Zone G	for the lump sum of	\$_____
11A.3	Zone H	for the lump sum of	\$_____
11A.4	Zone N	for the lump sum of	\$_____
	Cavitation Repairs to Energy Dissipator		
12A.1	Zone I	for the lump sum of	\$_____
12A.2	Zone J	for the lump sum of	\$_____
12A.3	Zone K	for the lump sum of	\$_____
12A.4	Zone L	for the lump sum of	\$_____
13A	Surface Preparation and Painting interior PRV surfaces , Zones A, M, I, J, K and L	for the lump sum of	\$_____
14A	Testing of the N1 PRV valve	for the lump sum of	\$_____
Total for Schedule A			\$_____

Schedule B Rehabilitate Pressure Regulating Valve (PRV)			
ITEM	WORK OR MATERIAL	QUANTITY AND UNIT PRICE	AMOUNT
1B	Mobilization and Preparatory Work	for the lump sum of	\$_____
2B	Pre-Shutdown Activities	for the lump sum of	\$_____
3B	Pre-Shutdown measurements	for the lump sum of	\$_____
4B	Disassembly of PRV	for the lump sum of	\$_____
	Furnishing and Final Machining Critical Replacement Components items		
5B.1.f	Furnish - Bushing, lower piston, control valve piston 1750-HP-1 item 387	for the lump sum of	\$_____
5B.1.m	Final machining (option) - Bushing, lower piston, control valve piston 1750-HP-1 item 387	for the lump sum of	\$_____
5B.2.f	Furnish - Seat for lower piston, control tip 1750-HP-1, item 383	for the lump sum of	\$_____
5B.2.m	Final machining (option) - Seat for lower piston, control tip 1750-HP-1, item 383	for the lump sum of	\$_____
5B.3.f	Furnish - Seal for lower piston, control valve 1750-HP-1, item 381	for the lump sum of	\$_____
5B.3.m	Final machining (option)- Seal for lower piston, control valve 1750-HP-1, item 381	for the lump sum of	\$_____
5B.4.f	Furnish - Bushing, cyl. Head to upper plunger 1750-HB-1 item 336	for the lump sum of	\$_____
5B.4.m	Final machining (option) - Bushing, cyl. Head to upper plunger 1750-HB-1 item 336	for the lump sum of	\$_____
5B.5.f	Furnish - Pilot piston bearing to lower plunger 1705-GW-1 item 268	for the lump sum of	\$_____
5B.5.m	Final Machining (option) - Pilot piston bearing to lower plunger 1705-GW-1 item 268	for the lump sum of	\$_____

5B.6.f	Furnish - Cylinder head to supply pipe 1705-HB-1 item 359	for the lump sum of	\$_____
5B.6.m	Final Machining (option) - Cylinder head to supply pipe 1705-HB-1 item 359	for the lump sum of	\$_____
5B.7.f	Furnish - Crosshead Pin, 1705-HJ-1, item 510	for the lump sum of	\$_____
5B.7.m	Final Machining (option)- Crosshead Pin, 1705-HJ-1, item 510	for the lump sum of	\$_____
5B.8.f	Furnish - Sleeve, 1705-GV-1, item 252	for the lump sum of	\$_____
5B.8.m	Final Machining (option) - Sleeve, 1705- GV-1, item 252	for the lump sum of	\$_____
5B.9	Furnish Split Gland, 1705-HB-1, item 341	for the lump sum of	\$_____
5B.10	Furnishing and final machining new stainless steel components, two seat rings, apron ring, discharge ring and fasteners. (Items 10-14)	for the lump sum of	\$_____
5B.11	Furnishing two reclose springs and miscellaneous renewable parts for the dashpot controls. (Items 15 &16)	for the lump sum of	\$_____
6B	Rehabilitation of Control Valve	for the lump sum of	\$_____
7B	Rehabilitation of PRV Operating Linkages	for the lump sum of	\$_____
8B	Rehabilitation of Dashpot	for the lump sum of	\$_____
9B	Rehabilitation of Piston and Cylinder Head of the PRV	for the lump sum of	\$_____
	Rehabilitation of the Body of the PRV		
10B.1	Zone A	for the lump sum of	\$_____
10B.2	Zone B	for the lump sum of	\$_____
10B.3	Zone C	for the lump sum of	\$_____
10B.4	Zone D	for the lump sum of	\$_____
10B.5	Zone E	for the lump sum of	\$_____
10B.6	Zone M	for the lump sum of	\$_____
	Rehabilitation of Main Piston (Lower) and seal Ring		\$_____
11B.1	Zone F	for the lump sum of	\$_____
11B.2	Zone G	for the lump sum of	\$_____

11B.3	Zone H	for the lump sum of	\$_____
11B.4	Zone N	for the lump sum of	\$_____
	Cavitation Repairs to Energy Dissipator		
12.B.1	Zone I	for the lump sum of	\$_____
12B.2	Zone J	for the lump sum of	\$_____
12B.3	Zone K	for the lump sum of	\$_____
12B.4	Zone L	for the lump sum of	\$_____
13B	Surface Preparation and Painting interior PRV surfaces, Zones A, M, I, J, K and L	for the lump sum of	\$_____
14B	Testing of the N2 PRV valve	for the lump sum of	\$_____
Total for Schedule B			\$_____

SECTION C - STATEMENT OF WORK/SPECIFICATIONS

SUBSECTION C.1 - GENERAL REQUIREMENTS

C.1.1 The Requirement

The Contractor shall rehabilitate the Pressure Regulating Valve (PRV) for Unit N1 with options to rehabilitate the similar PRV for Unit N2 at the Hoover Powerplant located near Boulder City, Nevada. The powerplant contains 19 hydroelectric units. The N1 and N2 PRVs were manufactured by S. Morgan Smith. Replacement bushings, seal rings, gaskets, and packings will be required. The valve will be disassembled by the Contractor and non-embedded parts removed to an off-site facility of the Contractor for rehabilitation. The Contractor shall re-assemble all the parts of PRV after rehabilitating the PRV.

The location of the powerplant is as shown on the location map Drawing No. 45-301-7669. All deliveries of Contractor furnished materials shall be to the Contractor's facility, see C.1.2 and C.6.5.

C.1.2 Description of Work

The Contractor shall rehabilitate the N1 Pressure Regulating Valve (PRV). The Government has the option to award an additional PRV valve rehabilitation for N2. Sliding and rotating surfaces of PRV components shall be accurately measured and compared to the drawing values, deviations from drawing values will be reviewed by USBR and a disposition issued to the Contractor. Contractor shall furnish specific critical components to be available as replacement parts. Disassembled components shall be removed from the powerplant to the Contractor's off-site facility for repair and rehabilitation prior to reinstallation into the PRV. Contractor shall replace all wetted fasteners, packings, gaskets and sealing materials. Wetted fasteners includes all threaded bolts and screws up to 2-1/4 inches in diameter that can come into contact with water either through direct immersion or leakage. Any non-wetted fasteners showing signs of corrosion shall also be replaced. PRV shall be painted, tested and restored to service.

The principal components of the work to be performed under the specifications are as follows:

- a. Pre-shutdown measurements
- b. Installation of four pressure gauges, one in the piston cylinder head, one in the control valve supply, and one on either side of the dashpot piston

- c. Pre-tear down measurements including instrumentation and recording devices
- d. Measurements of components during disassembly
- e. Examination and report of component condition, corrosion and damage
- f. Refurbishment or replacement of critical bushings or sliding surfaces
- g. Refurbishment of bushings in linkages
- h. Record refurbished dimensions for all refurbished components
- i. Refurbishment of seats and sealing surfaces
- j. Record dimensions of seats and sealing surfaces
- k. Refurbishment of check valves and flow control valves
- l. Repair of cavitated surfaces in the energy dissipation chamber
- m. Repair of cavitated surfaces of the valve body
- n. Coating of the energy dissipation chamber
- o. Coating of the inner body of the PRV
- p. Coating of the exterior surfaces of the PRV, operating linkages and dashpot
- q. Lubrication and refurbishment of all lube fittings, tubing and lubrication channels
- r. Refilling dashpot with oil
- s. Readjust all linkages to operational positions
- t. Test operation of PRV without water after turbine assembly
- u. Test operation of PRV after watering up the turbine

C.1.3 Submittal Requirements

a. General - The Contractor shall furnish all materials and perform all work required for furnishing submittals to the Government, in accordance with this paragraph, table C1, and the requirements in the provisions, clauses, and paragraphs of this contract.

The word "submittals" shall be interpreted to include drawings, data, manuals, certifications, test reports, curves, samples, brochures, and other items furnished by the Contractor for approval, informational, or other purposes.

b. List of submittals - Table C1 lists the submittals required by this solicitation contract/specifications except those submittals which are required conditionally, required by entities other than the Bureau of Reclamation, or which are periodic in nature. Any submittal required to be submitted by the Contractor, but which is not listed in the table, shall be submitted in accordance with the applicable requirements of this contract. In case of a conflict between the requirements of this paragraph and the requirements included elsewhere in this contract, the requirements elsewhere shall take precedence over the requirements contained in this paragraph.

c. Submittals - Each item in table C1 has been assigned a Required Submittal Number (RSN). The "Submittals required" column of the table specifies the material to be submitted for each RSN. All of the material specified for an RSN will be considered a complete set; and where the material required for an RSN is specified as separate or

distinguishable parts, a complete set shall include all parts. Only complete sets shall be submitted.

The number of complete sets to be submitted, and the location to which they are to be sent, shall be in accordance with the "No. of sets to be sent to:" column of the table, except as provided below for sets of original material.

When an RSN involves submittal of original (non-copied) material, all original material, or as much thereof as is necessary to form a complete set, shall be included in just one complete set. This "originals" set shall be sent to the proper address, given in subparagraph e. below, as determined by the "Responsible code" column of the table and the following:

- (1) "CO" indicates Contracting Officer.
- (2) "RE" indicates Regional Engineer.
- (3) "TSC" indicates Technical Service Center.

The "originals" set shall be counted as one of the complete sets required to be submitted under the "No. of sets to be sent to:" column of the table.

For each RSN, the Contractor shall submit complete sets of required submittal material under the cover of a transmittal letter. At the Contractor's option, complete sets for more than one RSN may be submitted under cover of the same transmittal letter, provided they have the same responsible code designation as shown in the table. The Contractor's transmittal letter shall include:

- (1) Reference to Bureau of Reclamation contract number and title.
- (2) Identification of responsible code as shown in the table.
- (3) Complete list of RSN(s) for which material is being submitted.
- (4) For each RSN, number of complete sets and list of materials included.
- (5) For each RSN, identification of the submittal as an initial submittal or a resubmittal.

Each drawing submitted by the Contractor shall have the Contractor's or supplier's title and drawing number on it. Drawings and data shall be labeled with the Bureau of Reclamation contract number and the bidding schedule item number. All dimensions shall be in feet and inches and all wording, signs, symbols, etc., shall be in English.

Manufacturer's data for commercial products or equipment, such as catalog cut sheets, shall be clearly marked to indicate the item(s) to be furnished. The data shall be sufficiently comprehensive to identify the manufacturer's name, type, model, size, and characteristics of the product or equipment, as well as to fully demonstrate that the product or equipment meets the requirements of these specifications. The Contracting Officer, at the Contracting Officer's option, may request sufficient additional drawings to demonstrate fully that the equipment to be furnished will conform to the requirements of these specifications.

d. Review of submittals furnished for approval - The time required for review of each submittal or resubmittal furnished under an RSN for approval will not begin until the Government receives complete sets of all the submittal materials required for that particular RSN. The number of calendar days required for review of drawings or data submitted or resubmitted for approval will include the date the drawings or data are received by the Government, and will extend through the date of return mailing to the Contractor.

Except as otherwise provided in these specifications for specific submittals, the Government will require 21 calendar days for review of each submittal or resubmittal furnished by the Contractor for approval, and this review time will apply to each separate submittal or resubmittal whether the submittals are approved, not approved, or returned for revision.

If the Government uses time in excess of the specified number of calendar days for review of any submittal or resubmittal, additional time, not to exceed the excess time, will be added to the time allowed the Contractor for delivery of the materials or equipment affected by such excess time, to the extent it is demonstrated that the excess time caused delay. If the Government's review of two or more separate submittals or resubmittals is late and results in concurrent days of excess time, such days will be counted only once in computing an extension of the delivery date. Further, if the Contractor fails to make complete approval submittals in the sequence and within the time periods specified in this contract, and thus precludes the Government from approving or considering for approval such submittals within the specified calendar day period, then the Contractor shall not be entitled to an extension of time allowed for delivery of the materials or equipment.

Unless otherwise specified, one set of the submittals required for approval will be returned to the Contractor either approved, not approved, or conditionally approved, and will be marked to indicate changes, if required. Submittals that are not approved or that require changes or revisions shall be revised and resubmitted for approval, and shall show changes and revisions with revision date. All requirements specified for the initial submittal shall apply to any resubmittals required. Unless otherwise specified, all submittals which are to be resubmitted shall be resubmitted by the Contractor within 40 calendar days after the Contractor has received the Government's comments.

Any manufacturing done or shipment made before approval of the drawings and data shall be at the Contractor's risk.

Approval by the Contracting Officer of the Contractor's drawings or data shall not be held to relieve the Contractor of any part of the Contractor's responsibility to meet all of the requirements of these specifications or of the responsibility for the correctness of the Contractor's drawings.

e. Addresses - The Contractor shall send the submittals to the applicable addresses listed below as required by table C1.

The Contractor shall also send a copy of the transmittal letter to each of the addresses listed below that are not sent the submittal.

Submittals shall be sent as required by table C1 to:

- (1) Contracting Officer, USBR-Lower Colorado Region
Attention: LC-3130
P.O. Box 61470
Boulder City, NV 89006-1470
- (2) Regional Engineer, USBR-Lower Colorado Region
Attention: LC-6000
P.O. Box 61470
Boulder City, NV 89006-1470
- (3) TSC, Technical Service Center
Bureau of Reclamation
Attn D-8420 Hydraulic Equipment
P.O. Box 25007
Denver CO 80225

f. Cost - Unless otherwise specified, no separate payment will be made for preparing and furnishing submittals to the Government, and the cost thereof shall be included in the prices bid in schedule A or B for the applicable items of work requiring the submittals or other items of work.

Table C1 - List of submittals

RSN	Item	Reference provision, clause, or paragraph	Responsible code	Submittals required	No. of sets to be sent to:*			Due date or delivery time
					RE	CO	TSC	
001	Bonds	52.228-15	CO	Performance and Payment Bonds	0	1	0	Within 15 calendar days of contract award.
002	Safety Data	WBR 1452.223-81	CO	Experience Modification Rate for Worker's Compensation Insurance; Log and Summary of Occupational Injuries and Illnesses; death and lost workday severity incidence rate	0	1	0	Within 20 calendar days of contract award.
003	Safety and Health	WBR 1452.223-81	RE	Safety program	3	0	0	Submitted and accepted before commencing onsite work.
004	Insurance - work on a Government Installation.	52.2285	CO	(1) Written certification that the required insurance has been obtained. (2) Current certification of insurance for each subcontractor.	0	1	0	Before commencing onsite work under the contract At least 5 days before entry of subcontractor's personnel on the Government Installation.
005	Liability Insurance	DOI 1452.228-70	CO	Acceptable evidence showing that insurance has been obtained.	0	1	0	Prior to commencement of work under this contract.
006	Accident prevention	52.236-13	CO	Accident exposure data.	0	1	0	Prior to commencement of onsite work under this contract.
007	Payment (electronic funds transfer)	52.232-34	CO	Payment Information	0	1	0	After award, but no later than 14 days before an invoice or contract financing request is submitted.
008	Release of Claims.	DOI 1452.204-70	CO	Release of claims (DI-137) against the United States.	3	1	0	After completion of the work and prior to final payment.
009	Subcontracts	52.222-11	CO	(1) List of subcontract. (2) Statement and Acknowledgment Form (SF 1413) for each subcontract.	3	1	0	Within 14 days after award of contract and within 14 days after award of an subcontracts.

RSN	Item	Reference provision, clause, or paragraph	Responsible code	Submittals required	No. of sets to be sent to:*			Due date or delivery time
					RE	CO	TSC	
010	Lead Abatement Program	C.1.4.c	RE	Lead Abatement program	3	0	0	60 days prior to commencement of onsite work under this contract
011	Material Safety Data Sheets (MSDS)	C.4.1	RE	Material Safety Data Sheets	0	1	0	Before commencing onsite work under the contract
M1-N1 & N2	Pressure gages	C.6.3.e.(1)	RE	catalog sheet	3	0	1	10 calendar days prior to testing
M2-N1 & N2	Pre-shutdown test procedure and equipment list	C.6.4.e.(1)	RE	procedure	3	0	1	10 calendar days prior to testing
M3	Disassembly and rehabilitation	C.6.5.e.(1) & (2)	RE	a) schedule b) procedures	3	0	1	Within 20 calendar days after receipt of Notice of Award
M4	Report of pre-shutdown testing, dimensions and conditions	C.6.3.e.(2) C.6.4.e. (2) & (3) C.6.5.e.(3)	RE	Data sheets, strip charts test assessment	3	0	1	Within 5 calendar days after testing
M5	All critical components	C.6.6.b. & c.	RE	Purchase orders	3	0	1	When issued
M6	All critical components	C.6.6.b. & c.	RE	NDE reports	3	0	1	Prior to shipment
M7	All critical components	C.6.6.b. & c.	RE	As-shipped dimensions	3	0	1	15 days after shipment
M8	Operating Linkage; Dashpot and Piston; Main Piston and Control Valve; Main Disc, seats	C.6.7.c.(1) C.6.8.d.(1) C.6.9.d.(1) C.6.10.e.(1) C.6.11.d.(1)	RE	Examination reports and requests for disposition	3	0	1	Within 5 calendar days after disassembly
M9	Operating Linkage; Dashpot and Piston; Main Piston and Control Valve; Main Disc, seats	C.6.7.c.(2) C.6.8.d.(2) C.6.9.d.(2) C.6.10.e.(2) C.6.11.d.(2)	RE	Deviation reports and repair procedures	3	0	1	Within 20 calendar days after disassembly
M10	Operating Linkage; Dashpot and Piston; Main Piston and Control Valve; Main Disc, seats	C.6.7.c.(3) C.6.8.d.(3) C.6.9.d.(3) C.6.10.e.(3) C.6.11.d.(3)	RE	Clearances of rehabbed components	3	0	1	Before dry run testing
M11	PRV Body, Control Valve and Energy dissipater	C.6.12.d.(1) C.6.13.d.(1)	RE	Examination Report and Cavitation Mapping	3	0	1	Within 5 days of mapping
M12	PRV Body, Control Valve and Energy dissipater	C.6.12.d.(2) C.6.13.d.(2)	RE	Repair plan and weld repair procedures	3	0	1	20 days prior to starting weld repair operations

RSN	Item	Reference provision, clause, or paragraph	Responsible code	Submittals required	No. of sets to be sent to:*			Due date or delivery time
					RE	CO	TSC	
M13	Operational Testing of PRV	C.6.14.c.(1)	RE	Procedures	3	0	1	30 calendar days prior to start of Phase 1 testing
M14	Phase 1 PRV testing, Dimensions	C.6.14.c.(2)	RE	Reports	3	0	1	Before Phase 2 testing
M15	Phase 2 PRV testing, Dry-run testing of PRV	C.6.14.c.(3)	RE	Reports	3	0	1	Before Phase 3 testing
M16	Phase 3 PRV testing, Manual operation testing of PRV	C.6.14.c.(4), and (5)	RE	Reports	3	0	1	Before Phase 4 testing
M17	Phase 4 PRV testing, Load rejection operational testing of PRV	C.6.14.c.(6)	RE	Reports	3	0	1	10 calendar days after completion of Phase 4 testing.
M18	Coating Materials	C.7.1.c	RE	(1) Product data and application sheets (2) Purchase orders (3) Certifications (4) Samples	0	1	1	Not less than 45 days prior to use of coating materials
M19	Coating	C.7.1.c	RE	Written evidence of coating applicator qualifications	0	1	0	At least 30 days prior to beginning coating

* CO indicates Contracting Officer, RE indicates Regional Engineer, and DO indicates Denver Office. For mailing addresses, see subparagraph e., "Addresses", of paragraph C.1.3., "SUBMITTAL REQUIREMENTS."

C.1.4 Handling and Disposal of Lead Contaminated Materials

- a. General - The pressure regulating valve to be disassembled and refurbished has been painted with lead-based paints and primers. The interior water passages and exterior surfaces of the valve require coating removal and re-coating. The required environmental precautions shall be exercised prior to working on these items.
- b. Disturbing of paint - The collection and containment of the lead-based paint separated from the equipment, or any paint stripping materials, shall be in accordance with the requirements noted below. Under no circumstances will burning of the painted surfaces be allowed.
- c. Lead Abatement Program - The Contractor's work shall conform to the OSHA general industry lead standard, 29 CFR 1926.62. The Contractor shall develop and implement a Lead Abatement Program (LAP). As required by paragraph C.1.3., Submittal Requirements, the Contractor shall submit the LAP for approval by the

Regional Engineer 60 days prior to start of work at site. The LAP shall have at least the following elements:

(1) Worker Safety and Protection Program - the Contractor shall submit and implement a plan for a site-specific worker safety and protection program to minimize lead exposure. All on-site workers shall be familiar with the safety program and shall be given training on its contents. The plan shall be available on the site for inspection by employees and regulatory personnel. As a minimum, this plan shall include the following:

- (a) Engineering controls and good worker practice.
- (b) Medical surveillance.
- (c) Protective clothing and equipment to be utilized.
- (d) Respiratory protection program.
- (e) Exposure monitoring and sampling.
- (f) Record keeping.
- (g) Hygiene facilities and practices.
- (h) Employee training and certifications.

(2) Lead Handling Program - Since all of the metal components of the turbine and generator equipment are assumed to have been painted, the LAP shall contain a program to safely handle these components.

(3) Removal and Disposal Program - Where the work will require disturbing the paint system, the LAP shall contain a program to remove and properly dispose of the lead-based paint and any removal media contaminated by lead. The removal and disposal process shall comply with all applicable State, Federal, and local regulations pertaining to lead or lead contaminated products, and with applicable requirements of the Reclamation Safety and Health Standards. Should a conflict exist in the requirements for cleanup and disposal of these materials, the most stringent requirement shall apply.

(4) Other LAP elements - In addition to the above-noted elements, the LAP shall also contain the following items:

- (a) Plans to capture and contain lead-based paint, and for working with equipment where the paint is intended to remain undisturbed.
- (b) Name of licensed hazardous waste transporter to be used, and EPA transporter number.

- (c) Name and location of class 1 disposal site, and EPA facility number.
- (d) Hazardous waste manifest.
- (e) Certification of legal disposal and/or destruction of lead-based paint and lead contaminated materials.

d. Containment and Disposal of lead contaminated materials -

(1) General - Lead contaminated materials or wastes, that are defined as hazardous (by 40 CFR 261.3; Federal Standard 313, as amended; or by other Federal, State, or local laws or regulations) shall be disposed of in accordance with the contract and applicable Federal, State, and local laws and regulations. The Contractor shall be responsible for testing undisturbed materials that may be hazardous and the test results shall be submitted to the Contracting Officer for review.

(2) Containment - All lead-based paint chips and lead contaminated material which has separated from the equipment shall be contained and collected in U.S. Department of Transportation-approved containers. Containers shall be labeled in accordance with all EPA regulations for hazardous waste materials.

Included on the label shall be the EPA generator number for the work to be accomplished at the Hoover Powerplant.

(a) Filling Containers - All containers shall be a minimum of 90% full. Respirator cartridges, worker clothing, and other worker protection equipment shall also be placed in containers for disposal. If there is not enough waste to bring a container to the 90% full limit, the Contractor shall place clean, nonreactive sand in the containers to meet the minimum requirements.

(b) Government verification - After sealing drums and prior to loading of containers for transportation, the Contractor shall notify the Contracting Officer. Containers will be inspected to verify they meet all disposal requirements prior to loading and transportation.

(3) Disposal - Prior to disposal in a hazardous waste facility, the Contractor shall conduct a toxic characteristic leaching potential test (TCLP) on the lead-based paint in accordance with Appendix II of 40 CFR 261, "Identification and Listing of Hazardous Waste". Disposal of paint chips and associated material shall be at a permitted hazardous waste facility. The hauler of the materials shall be a licensed

hazardous waste hauler. All fees, permits and all other requirements for disposal of the material shall be the responsibility of the Contractor.

e. Records - The Contractor shall keep records of the types and amounts of lead contaminated materials produced, and of the disposal of all such materials.

f. Costs - The cost for testing, providing analytical reports, removing and disposing of lead-based paint material shall be included in the contract price for disassembling, refurbishing, assembling, and testing the PRV. This cost shall include the cost of the employee lead safety program, removal of the paint material from the powerplant, placing separated paint material in DOT-approved containers, performance of TCLP test, transportation of containers to an approved disposal facility, and disposal of material at the facility.

SUBSECTION C.2 - MATERIALS AND WORKMANSHIP

C.2.1 Materials

a. General - The words "materials" and "material" as used in the contract to denote items required to be furnished by the Contractor shall be construed to mean equipment, machinery, product, component, or any other item procured under the contract. Unless otherwise stated in the contract, materials used in the manufacture of the equipment shall be new and of the highest standard commercial quality as normally used for this type of equipment, considering strength, ductility, durability, best engineering practice, and the purpose for which the equipment is to be used.

Unless otherwise specified, materials used in the manufacture of the equipment shall conform to the applicable specifications of ASTM, ANSI or SAE. If the Contractor for justifiable cause proposes to deviate from — or to use materials not covered by ASTM, ANSI or SAE shall state the reasons for — and the exact nature of — the deviation, and shall submit for the approval of the Contracting Officer complete specifications for the materials that the Contractor proposes to use.

Parts shall be made accurately to standard gauge where possible so as to facilitate replacement and repair. Bolts, nuts, screws, taps, pipes, and pipe fittings shall have unified screw threads conforming to ASME B1.1(1989) and B1.2(1992). For internal connections of individual items of equipment only, the Contractor will be permitted to deviate from ASME, provided that the Contractor furnishes a complete set of all such necessary taps and dies which might be required by the Government to facilitate repair or replacement.

Contractor shall clean-up and re-use all serviceable, non-wet environment fasteners. Fasteners that are subject to water exposure either continuously or infrequently shall be replaced. All new fasteners shall be permanently marked with a symbol identifying the manufacturer and with symbol(s) indicating grade, class, type, and other identifying marks in accordance with referenced or applicable standards.

The word "Code" as used in this paragraph, refers to Section VIII of the ASME Boiler and Pressure Vessel Code(2000), including modifications made by addenda and by approved code cases.

Electrical materials and equipment shall conform to the requirements of the applicable standards of the American National Standards Institute, Institute of Electrical and Electronics Engineers, Inc., and/or National Electrical Manufacturers Association.

b. Unit Stresses - Liberal factors of safety and adequate shock-absorbing features shall be used throughout the designs and especially in the design of all parts subject to stresses or shock, including alternating- and vibrating-type stresses and shock. Shock-absorbing features shall include provisions which prevent components from loosening.

Materials for parts subject to stress due to hydraulic pressure, and materials for other principal stress-carrying parts shall conform to specifications permitted by the Code or to specifications of the American Society for Testing and Materials, provided that if materials conforming to ASTM specifications are used, the materials shall be suitable for the intended use and equal to corresponding Code materials as determined by the Contracting Officer. Upon request from the Contracting Officer, the Contractor shall furnish design calculations and complete information as to the maximum unit stresses used in the design.

The following design conditions shall be met:

(1) Allowable unit stresses under normal operating conditions - Parts subject to the water pressure resulting from the maximum head plus the design value for water hammer shall be designed for a hydrostatic pressure of 280 pounds per square inch. Other parts shall be designed for the most severe normal operating conditions, including load rejection or short circuit at machine terminals. Under the conditions specified above, the unit stress shall conform to the following requirements.

(a) For materials permitted by the Code, or for materials conforming to specifications of the American Society of Testing and Materials corresponding to the Code Specifications, when approved, the unit stresses shall not exceed those allowed by the Code.

(b) For materials conforming to other specifications, the maximum allowable unit stress shall be determined on the same basis as was used in establishing the maximum allowable unit stress values specified in the Code, which basis is described therein.

(c) For other materials, the unit stresses shall not exceed one-third of the yield point nor one-fifth of tensile strength of the material.

(2) Allowable unit stresses under abnormal conditions - Unit stresses higher than those permitted by subparagraph c above, but not to exceed the two-thirds of the yield point, will be permitted for the initial pre-stress of bolts.

- c. Specific materials shall be as specified in the technical paragraphs.

The Contractor shall send the Contracting Officer, upon his request, a copy of each mill or shop order for material purchased by the Contractor for use in the fabrication of PRV components. The copies of the orders shall state the place at which the material is to be manufactured. All such mill or shop orders shall quote the requirements of the special conditions and drawings for articles, materials, and supplies to be furnished.

- d. Centrifugal Castings.--

- (1) Certificates showing the results of the ladle analysis shall be furnished to the Contracting Officer. The casting shall be heat treated.

- (2) Repairs shall not be made to castings without the approval of the Contracting Officer. Repairs shall not be made to castings when the defect, properly prepared for welding, exceeds 15 percent of the wall thickness of the final part or one inch, whichever is smaller. Welds shall be stress relieved in accordance with the material ASTM specification. When the Contracting Officer consents to the repair of castings by welding, the Contracting Officer may require radiographic, dye penetrant, or other nondestructive inspection to determine the adequacy of the repairs.

C.2.2 Workmanship

All work shall be performed and completed in a thorough, workmanlike manner and shall follow the best modern practice in the manufacture of high-grade machinery. All work shall be performed by craftsmen skilled in their various trades. All parts shall be made accurately to standard gauge so as to facilitate replacement and repairs.

C.2.3 Welding

- a. General - Welding shall be performed by the electric-arc method by a process that excludes the atmosphere from the molten metal, and where practicable, by automatic machines. Machined surfaces of parts affected by welding shall be machined to final dimensions after welding. Machined surfaces of parts requiring stress-relief shall be machined to final dimensions after the parts have been stress-relieved.

- b. Design and fabrication - Unless otherwise provided, the design and fabrication of all welded parts shall conform to the following requirements:

- (1) Principal stress-carrying parts - The design and fabrication of welded parts subject to stress due to hydraulic pressure and of other principal stress-carrying

parts shall be in accordance with Part UW of Section VIII of ASME Boiler and Pressure Vessel Code (2000) , with the following exceptions:

- (a) Localized stress-relieving will not be permitted for shop-welded parts.
- (b) Stress-relieving of field-welded joints will not be required.
- (c) Where required under the Code or under this solicitation, welded joints shall be inspected by a non-destructive method approved by the Contracting Officer.

(2) Less important parts - The fabrication of less important parts shall be in accordance with the Standard Code for Arc and Gas Welding in Building Construction of AWS D1.1 2000. Stress-relieving of above parts will not be required.

c. Welding qualifications - The qualification of welding procedures, welders, and welding operators shall conform to the requirements of Section IX of ASME Boiler and Pressure Vessel Code (2000) .

Non-destructive examination personnel shall be qualified in accordance with the applicable method of the American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A 1996, or have equivalent qualifications.

C.2.4 Reference Specifications and Standards

Materials, Contractor design, construction work, and other requirements which are specified by reference to Federal Specifications, Federal Standards, or other standard specifications or codes shall comply with the editions or revisions listed. In the event of conflicting requirements between a referenced specification, standard, or code and these specifications, these specifications shall govern.

In the event that materials are not covered by Federal or other specifications, the materials furnished shall be of standard commercial quality.

Copies of Federal Specifications and standards may be obtained from GSA Federal Supply Service Bureau. See the provision at FAR 52.211-1, "Availability of Specifications Listed in the GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29." Many of the Federal Specifications and Standards may be examined at the Bureau of Reclamation Denver Office Library,

building 67, Denver Federal Center, West 6th Avenue and Kipling Street, Denver, Colorado.

Bureau of Reclamation Standard Material Specifications and Methods of Tests (The M-series documents) may be obtained from the Bureau of Reclamation, Attn D-8170, PO Box 25007, Denver CO 80225-0007, telephone (303) 445-3082.

Other Reclamation publications; including manuals and Reclamation's significant scientific, technical, and engineering works; are available from the National Technical Information Service (NTIS). Information regarding availability and pricing may be obtained by contacting NTIS at the following address:

United States Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield VA 22161
Telephone: (703) 487-4650 or 1-800-553-6847

This address may also be used to order the various manuals and standard specifications printed, reprinted, or published while the Bureau of Reclamation was officially named the Water and Power Resources Service. All references to Water and Power Resources Service or any form derivative thereof shall be considered synonymous with the Bureau of Reclamation.

Addresses for obtaining some industrial and governmental (other than Federal and Bureau of Reclamation specifications and standards) specifications, standards, and codes are listed in the provision at FAR 52.211-3 "Availability of Specifications Not Listed in the GSA Index of Federal Specifications, Standards and Commercial Item Descriptions."

The Contractor shall maintain onsite, a copy of referenced specifications and standards related to work proceeding at the jobsite while the work is being performed. These shall be available for use by the Government.

SUBSECTION C.3 - LOCAL CONDITIONS

C.3.1. Access to the Work and Haul Routes

- a. General.--The Contractor shall make its own investigation of the condition of available public or private roads and of clearances, restrictions, bridge-load limits, bond requirements, and other limitations that affect or may affect transportation and ingress and egress at the jobsites. Subject to the clause entitled "Default (Fixed-Price Construction)," the unavailability of transportation facilities or limitations thereon shall not become a basis for claims for damages or extension of time for completion of work.
- b. Existing roads.--Existing roads are available for the Contractor's use subject to existing restrictions. The Contractor shall meet all conditions properly imposed upon the use of existing roads by those having jurisdiction there over, including seasonal or other limitations or restrictions.
- c. Haul routes.--The hauling of construction materials or waste materials over public highways, roads, or bridges shall be in compliance with the applicable local regulations and shall be such as to minimize interference with or congestion of local traffic.
- d. Parking.--Parking is extremely limited in the construction area, and the Contractor will be restricted to two vehicles that may be parked there. The Contractor shall use parking areas adjacent to the construction site as approved by the Contracting Officer, and shall not block traffic with parked vehicles, equipment, and/or materials. Additional area for the Contractor's employee parking will be provided at an area near the Government warehouse on U.S. Highway 93.

The Contractor shall place an identification label, with the Contractor's name, on the windshield of vehicles parked at the construction area. This will not be required if the Contractor's name is prominently displayed at some other location on the vehicle.

- e. Cost.--The cost of all work described in this paragraph shall be included in the prices bid in the schedule for other items of work.

C.3.2. Security and Identification of Employees

The operation of Hoover Dam and Powerplant requires continuous and effective security measures. Such security is carried out by a Federal guard system, and the security regulations provide for controlled access to certain restricted areas including switchyards, powerplants, and other critical areas. These restricted areas are designated and may be modified or changed by the Contracting Officer. All necessary

security measures required by this contract including provisions for security police and/or guards shall be subject to the approval by the Contracting Officer. The Contractor shall be responsible for initiating necessary measures to insure that its employees comply with all established security rules and regulations, including but not restricted to the following:

- 1) Construction work areas.--All areas where work is required under this contract are designated as construction work areas. The Contracting Officer will designate suitable accessways to construction work areas for use of construction personnel. Unless specifically authorized, construction personnel shall be restricted to these areas. It shall be the Contractor's responsibility to insure by appropriate and effective means that its personnel remain in these areas while on the jobsite.
- 2) Restricted areas.--Construction personnel will not be permitted to enter established or designated restricted areas unless so authorized by the Contracting Officer. Such entry shall be in accordance with and subject to the security regulations established in the area. It shall be the Contractor's responsibility to insure by appropriate and effective means that its personnel shall not enter these areas unless authorized as set forth above.
- 3) Identification of Contractor employees.--All Contractor personnel who will require access to secured areas of the Hoover Dam facilities shall be issued a numbered identification badge clearly identifying the employee and its employer. Such identification shall be required for all employees on the jobsite and shall be worn at all times. If special badges holding the employee's photograph are required for restricted areas, such badges will be furnished by the Government.

Initial issuance of badges will be made at no cost to the Contractor; however, the cost of replacement badges shall be borne by the Contractor. All badges must be returned to the Contracting Officer upon completion of the work.

The cost of complying with this paragraph shall be included in the prices bid in the schedule for other items of work.

C.3.3. Use of Land for Service Purposes

- a. General.--The Contractor will be permitted to use Government land, controlled by the Bureau of Reclamation, for field offices, plants and buildings, storage yards, shops, and other service facilities required for service purposes.

b. Government land.--The Contractor's use of Government land for service purposes shall be subject to SUBSECTION C.5 (ENVIRONMENTAL QUALITY PROTECTION) of these specifications, and to the requirements of this paragraph. Such use shall not interfere with any part of the work under this contract, nor with the work of other contractors or the Government in the vicinity, nor with reservations made, or as may be made, by the Government for the use of such land.

c. Cost.--No charge will be made to the Contractor for the use of Government land for service purposes.

C.3.4. Protection of Existing Installations

a. General.--In performing work in the existing facility, the Contractor shall take all necessary precautions to safeguard existing installations.

The Contractor shall furnish, install, and maintain adequate protection as needed to safeguard personnel and existing facilities from harm due to its operations. Such protection shall be subject to approval by the Contracting Officer.

All protective installations shall be arranged so as to permit operation of the existing equipment and facilities by the Government while work under these specifications is in progress. The Contractor shall remove all protective installations provided by them after they have served its purpose. The materials furnished by the Contractor to provide protection shall remain the property of the Contractor and, after removal, shall be transported from the worksite.

Drawings included in these specifications show the items of existing materials and equipment but do not purport to show all equipment and materials existing at the worksite.

b. Enclosures.--Enclosures shall be constructed by the Contractor to prevent weld spatter, dust, spalls, chips, grit, and other foreign material from endangering personnel and contaminating or damaging equipment during service operations.

Enclosures shall be subject to approval of the Contracting Officer. Enclosures shall be sufficient to confine the Contractor's operations to the immediate work area, and to prevent contaminating and damaging mechanical and electrical installations.

c. Damages.--The Contractor shall repair, at its expense, any damage to the existing installations due to the Contractor's operation or its failure to provide proper protection;

or at the option of the Contracting Officer, any such damage may be repaired by the Government and the Contractor will be back charged for the cost thereof.

d. Cost.--The cost of protection of existing installations in accordance with this paragraph shall be included in the prices bid in the schedule for other items of work.

C.3.5. Government and Contractor Furnished Facilities

The following Government facilities will be available to the Contractor at no charge for use in the performance of work under these specifications:

- a. Water.
- b. Sanitary facilities.--Existing restrooms will be made available.
- c. Electrical power.--Single phase, 60-hertz, alternating current at approximately 120/240 volts
- d. Compressed air.--Pressurized air lines at approximately 80 to 90 pounds per square inch at various locations within the powerhouse will be made available to the Contractor upon request.

The location of these facilities will be shown during the prebid site visit or after award of the contract. Facilities are provided on an as-is, where-found basis. The Contractor is responsible for being cognizant of the location of the utilities.

The Contractor shall provide all necessary distribution circuits, transformers, and other electrical equipment required for distributing the power to the place or places of use by the Contractor and shall dismantle and remove from the site of the work all such distribution circuits and equipment at the termination of the contract.

Likewise, the Contractor shall provide all means of conveying water and/or compressed air to points of use and shall remove from the site all Contractor equipment at the termination of the contract.

The cost of providing necessary materials and labor for conveying water and power to points of use shall be included in the prices bid in the schedule for other items of work.

C.3.6 Use of Existing Government Equipment

Government equipment as defined below, that is located at the jobsite, will be operated by Government personnel. The Government will remain responsible for the normal maintenance responsibilities for Government equipment.

- a. The Nevada powerplant, 300-ton crane will be available to the Contractor for use. The operation of the crane will be performed by a Government employee. The cost to the Contractor for use of the crane will be \$75 per hour which will include one operator. The Contractor will be responsible for all rigging of the loads. There will be a minimum 2 hours charge for each time the Contractor requests the use of the crane.
- b. The existing 150-ton cableway, which is located downstream of the dam and is the only means for transfer of oversized loads from U.S. Highway 93 and powerhouse area, will be made available for the Contractor's use in hoisting materials and equipment between an existing parking lot at the cableway adjacent to Highway 93 and the designated work areas. The cost to the Contractor for using the cableway, including standby time, will be \$200 per hour, which price shall include one operator. The Contractor will be responsible for rigging of all loads. There will be a minimum of 2 hours time charged for each time the Contractor requests the use of the cableway.

The Contractor shall make all necessary provisions for maintaining the flow of public traffic and shall conduct the Contractor's operations so as to offer the least possible obstruction and inconvenience to public traffic.

The Contractor will have access to the cableway parking lot for use while loading and unloading equipment and materials. The Contractor shall make every effort to utilize the available cableway parking lot to minimize any traffic delays.

If loading or unloading equipment and materials using the 150-ton cableway will interrupt one or both lanes of traffic on US Highway 93, the Contractor shall submit a traffic control plan including, but not limited to: night lighting, traffic cones, flashers, flagmen, etc.

(1) The following delays will be permitted when at least 1 hour of two-way traffic will be provided immediately after the delay:

Day - 6:01 a.m. to 9 p.m.	15 minutes
Night - 9:01 p.m. to 6 a.m.	60 minutes

Following completion of an allowable delay, the Contractor shall not initiate another delay until backlogged traffic has cleared the construction area, as determined by the Contracting Officer or his representative at the site, or at least 1 hour of normal traffic flow has been allowed to pass through the construction area.

The Contractor shall coordinate the traffic control operations with other contractors and Government forces at the site. Operations shall be adapted and scheduled to ensure that the traffic delay provisions listed are not exceeded.

- c. The existing 6-ton and 10-ton flatbed trucks and 50-ton Linkbelt crane, will be made available for the Contractor's use in transporting and off-loading material and equipment between the powerhouse area and the Hoover Dam Central Warehouse. The cost to the Contractor for using the trucks and crane, including standby time, will be \$200.00 per hour, which price shall include two Hydro-electrical Mechanics. The Contractor will be responsible for rigging of all loads. There will be a minimum of 2 hours time charged for each time the Contractor requests the use of the trucks and crane.

Payment to the Government by the Contractor for use of Government equipment shall be made by showing a credit to the Government on each progress payment request of the total payment due the Government for the Contractor's use of the Government equipment during the period for which the progress payment is being requested. The total amount due the Government shall be agreed upon by both parties prior to including the credit on the request for progress payment. A final adjustment to the contract price reflecting the total amount credited to the Government for use of Government equipment will be accomplished by modification to the contract at the completion of the contract performance period.

The request for use of this equipment shall be made to the Regional Engineer in writing at least 48 hours prior to each scheduled time of use. The use of the above equipment is restricted to the hours between 7:00 a.m. to 4:00 p.m. Monday through Thursday excluding Holidays.

The Contractor shall be responsible for providing all materials necessary to safely rig each load for the cranes, cableway and trucks described above .

SUBSECTION C.4 - SAFETY

C.4.1. Submission of Material Safety Data Sheets for Hazardous Materials

The Contractor shall not require or permit any employee employed in the performance of the contract to engage in work under conditions which are unsanitary, hazardous, or dangerous to the employees health or safety and shall therefore comply with the Reclamation Safety and Health Standards (1993). After award of contract, the Contractor shall submit updated List of Hazardous Materials (LHM) and Material Safety

Data Sheets (MSDS) in accordance with the requirements of paragraph (e) of the clause at FAR 52.223-3, "Hazardous Materials Identification and Safety Data."

The Contractor shall submit the updated LHM and completed MSDS and identification and certification for each material to the Bureau of Reclamation, Lower Colorado Dams Office, Regional Engineer, Attn: LC-6000, P.O. Box 61470, Boulder City NV 89006-1470. Copies of the updated LHM and completed MSDS shall be submitted in accordance with Paragraph C.1.3. (SUBMITTAL REQUIREMENTS). The Contractor shall not deliver any hazardous material to the jobsite which was not included on the original LHM prior to acceptance of the Contractor's MSDS by the Construction Engineer, Boulder City, Nevada.

The cost of complying with this paragraph shall be included in the applicable prices bid in the schedule for the items of work for which the hazardous materials are required.

SUBSECTION C.5 - ENVIRONMENTAL QUALITY PROTECTION

C.5.1. Prevention of Water Pollution

a. General.--The Contractor shall control pollutants by use of wastewater management controls, service site management practices, and other controls, including State and local control requirements.

(1) Service site management.--The Contractor shall perform service activities by methods that will prevent entrance, or accidental spillage, of solid matter, contaminants, debris, or other pollutants or wastes, into streams, flowing or dry watercourses, lakes, wetlands, reservoirs, or underground water sources. Such pollutants and wastes include, but are not restricted to: refuse, garbage, cement, sanitary waste, industrial waste, hazardous materials, radioactive substances, oil and other petroleum products, aggregate processing, tailings, mineral salts, and thermal pollution.

(2) Service safety standards.--The Contractor shall comply with the sanitation and potable water requirements of section 7 of Reclamation's publication "Reclamation Safety and Health Standards."

(3) Laws and regulations.--The Contractor shall perform service operations in such a manner as to comply, and ensure all subcontractors to comply, with all applicable Federal, state, and local laws, orders, regulations, and Water Quality Standards concerning the control and abatement of water pollution. In the event there is a

conflict between Federal, state, and local laws, regulations, and requirements, the most stringent shall apply.

- b. Cost.--The cost of complying with this paragraph shall be included in the prices bid in the schedule for other items of work.

C.5.2. Abatement of Air Pollution

- a. General.--The Contractor shall comply with applicable Federal, state, and local laws and regulations and with the requirements of this paragraph concerning the prevention and control of air pollution. Should a conflict exist in the requirements for abatement of air pollution, the most stringent requirement shall apply. The Contractor shall utilize such methods and devices as are reasonably available to prevent, control, and otherwise minimize atmospheric emissions or discharges of air contaminants.

Burning of combustible service materials and rubbish will not be permitted. In lieu of burning, such combustible materials shall be disposed of in accordance with Paragraph C.5.3. (CLEANUP AND DISPOSAL OF WASTE MATERIALS).

Storage and handling of flammable and combustible materials, provisions for fire prevention, and control of dust resulting from service operations shall be in accordance with the applicable provisions of Reclamation's 1993 publication "Reclamation Safety and Health Standards."

- b. Submittals.--Submittals shall be in accordance with this paragraph and Paragraph C.1.3. (SUBMITTAL REQUIREMENTS).

Prior to commencing any activity for which an Air Quality Permit is required, the Contractor shall submit, for informational purposes, a copy of the applicable Air Quality Permit. Air Quality Permits are required for certain service-related activities including, but not limited to, earthmoving, sandblasting, aggregate processing, welding, spray-coating operations, or other processes which discharge pollutants into the open air.

Air Quality Permits, and information concerning the requirements, can be obtained from the appropriate state agencies.

- c. Cost.--The cost of complying with this paragraph shall be included in the prices bid in the schedule for other items of work.

C.5.3. Cleanup and Disposal of Waste Materials

a. General.--The Contractor shall be responsible for the cleanup and disposal of waste materials and rubbish. Contractor removed piping and appurtenances to be disposed of shall be considered waste material. The disposal of waste materials and rubbish shall be in accordance with applicable Federal, state, and local laws and regulations, with applicable requirements of Reclamation's publication "Reclamation Safety and Health Standards," and with the requirements of this paragraph. Should a conflict exist in the requirements for cleanup and disposal of waste materials, the most stringent requirement shall apply.

The Contractor shall keep records of the types and amounts of waste materials produced, and of the disposal of all waste materials on or off the jobsite.

In the event of the Contractor's failure to perform the work required by this paragraph, the work may be performed by the Government, and the Contractor will be backcharged for the cost of such work. The Contractor's surety or sureties shall be liable for such payment until received by the Government.

b. Cleanup.--The Contractor shall keep work and storage areas free from accumulations of waste materials and rubbish, and before completing the work, shall remove all plant facilities, buildings, enclosures, including concrete footings and slabs, rubbish, unused materials, concrete forms, and other like materials, which are not a part of the permanent work.

In addition, the Contractor will be required to conduct an environmental site assessment at the following Contractor use locations:

(1) All hazardous waste accumulation areas.

(2) All hazardous material storage areas where the aggregate storage of hazardous materials at the site is or has been over 110 gallons.

This site assessment shall be performed by an industrial hygienist, an environmental specialist, or equivalent, and shall document through appropriate analytical sampling that the site is free of the effects of contamination (i.e., contaminant concentrations less than state action cleanup levels).

c. Disposal of hazardous waste and materials.--Materials or wastes, defined as hazardous by 40 CFR 261.3; Federal Standard 313, as amended; or by other Federal, state, or local laws or regulations, used by the Contractor or discovered in work or

storage areas, shall be disposed of in accordance with these specifications and applicable Federal, state, and local laws and regulations. Unknown waste materials that may be hazardous shall be tested, and the test results shall be submitted to the Contracting Officer for review.

Waste materials known or found to be hazardous shall be disposed of in approved treatment or disposal facilities. Hazardous wastes shall be recycled whenever possible. A copy of all hazardous waste manifests shall be sent to the Contracting Officer.

Waste materials discovered at the service site shall immediately be reported to the Contracting Officer. If the waste may be hazardous, the Contracting Officer may order delays in the time of performance or changes in the work, or both. If such delays or changes are ordered, an equitable adjustment will be made in the contract in accordance with the applicable clauses of the contract.

d. Disposal of other nonhazardous waste materials.--

(1) General.--Waste materials including, but not restricted to, refuse, garbage, sanitary wastes, industrial wastes, and oil and other petroleum products, shall be disposed of by the Contractor. Disposal of combustible materials shall be by removal from the service area. Disposal of combustible materials by burning will not be permitted.

(2) Disposal by removal.--Waste materials to be disposed of by removal from the service area shall be removed prior to completion of the work under these specifications. All materials removed shall become the property of the Contractor.

Waste material shall be dumped only at an approved sanitary landfill. The Contractor shall make any necessary arrangements with private parties and county officials pertinent to locations and regulations of such landfills, and shall pay any fees or charges required for such dumping.

e. Cost.--Except as provided above, the cost of cleanup and disposal of waste materials in accordance with this paragraph shall be included in the prices bid in the schedule for other items of work.

SUBSECTION C.6 - REHABILITATION OF PRESSURE REGULATING VALVE

C.6.1 General

The Contractor shall furnish all labor, material, equipment, and support personnel required for the disassembly and assembly of PRV as shown on the drawings and in accordance with these specifications.

The Contractor may schedule the existing main 300 ton crane during his construction operations. The Contractor shall give the Bureau 48-hour notice of their crane requirements. The Government reserves the priority use of the cranes. The crane will be operated by the Government, see subsection C.3.6 for using the existing Government crane.

C.6.2 Clearance and Safety Procedure

The contractor shall provide his own padlocks for lockout and clearance of the Unit.

During disassembly and assembly of the PRV, the Contractor's operations shall be such that no oils, grease or other unacceptable materials are released into the river. Oil and grease spills within the powerplant shall be kept to a minimum and immediately cleaned up.

C.6.3 Pre-shutdown Activities

a. General.--Prior to the disassembly of the PRV, the Contractor shall study the drawings and operational description and become familiar with the construction of the unit. Any special instructions on any of the drawings for disassembly shall be noted. Any Contractor-fabricated tools shall become the property of the Government.

b. Pressure Gauges/transducers.- The PRV will be temporarily taken out of service and de-watered for installation of gauges/transducers to assist the rehabilitation. Several key pressures are necessary to be recorded and utilized during the pre-shutdown phase to monitor current conditions. To install the pressure gauges/transducers, the unit will be shut down, butterfly valve closed and the spiral case, turbine and draft tube drained to below the PRV disc. Pressure gauges/transducers shall be installed to record the following:

- (1) Penstock pressure
- (2) Dashpot pressures during load rejection

c. Linear displacement transducers.- Linear displacement transducers shall be temporarily installed at five locations:

- (1) servomotor
- (2) dashpot cylinder
- (3) dashpot piston
- (4) pilot valve 7/8" lift relative to main piston
- (5) main piston/disc

d. Measurements.- With the turbine gates shut and the unit dewatered the following measurements shall be taken:

- (1) Turbine Servomotor full stroke 0-100% (13.5625 inch nominal)
- (2) Radius of adjustable lever (35.25 inch nominal)
- (3) Dashpot cylinder stroke (18.25 inch nominal)
- (4) Needle stroke (20.25 inch nominal)
- (5) Operation of dashpot with four-way valve using temporary high pressure hoses to governor system
- (6) 1 1/4 inch special valve, piston position (turns open) (reclose rate adjustment)
- (7) 2 inch check valve, adjustable stop position

e. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements):

- (1) Catalog cut sheets for the pressure gauges and transducers.
- (2) Data Sheets with recorded measurements

f. Payment.- Payment for pre-shutdown activities will be included in the lump-sum price bid therefore in schedule A or B, Item 2, which price shall include all labor, materials, and equipment required for furnishing and installing pressure gauges/transducers, linear displacement transducers and unwatered measurements of the PRV.

C.6.4 Pre-shutdown Measurements, Readings and Operations

a. General.- The Contractor shall develop examination reports and records of present condition and problems of the PRV. This can help identify specific items that need attention during the overhaul of the PRV. Pre-tear down measurements shall be taken of all accessible, adjustable linkages, pivots and valves. The pre-shutdown activities and readings shall include, but not be limited to the following:

- (1) Monitor leakage flows above the pilot valve prior to shutdown using clamp-on flow meter
- (2) Wiring of 5 linear displacement transducers to a data acquisition system, recording during load rejections and other test operations.
- (3) Turbine load rejections in 25% increments to establish PRV timing relative to turbine shift ring travel, PRV control valve plunger travel, PRV disc travel, dashpot cylinder travel, dashpot piston travel, penstock pressure
- (4) Dashpot oil tank level
- (5) Reclose valve position relative to top of 1 1/4" check valve, (adjustable valve in dashpot circuit)

b. Data Recording.- The five outputs of the linear displacement transducers and the penstock pressure shall be simultaneously recorded as six channels on a contractor furnished strip chart recorder or an approved digital data recording during the pre-shutdown testing to establish turbine gate timing and disc opening timing, delay prior to disc movement and stroke of the servo and PRV. Data recording shall run at a fast rate for the opening phase of the PRV (1 inch per second). The data recorder shall continue to record while the disc recloses, however the data acquisition speed can be reduced during this phase. Data acquisition speed, calibration and other test conditions including reservoir level and power shall be noted on the output.

Leakage rates will be estimated and recorded by pressure leak down rate of pressure gauges, and observation of drain piping and packing leakage. Contractor shall install a contractor furnished clamp-on flow meter to the 2 inch supply pipe above the pilot piston. Flow rates shall be recorded during control valve operations. Video or photos should be utilized to document leakage. The flow meter will be utilized during the operational testing after rehabilitation and the flowmeter will remain the contractor's equipment.

c. Test of Re-close .- The disc re-close rate will be tested by manually controlling the disc with the 4-way valve at the dashpot.

Strip chart recordings of the linear displacement transducers shall be the primary documentation for the following pre-shutdown operations.

- (1) Without changing the existing plunger valve (re-close) setting and with the butterfly valve open, and the turbine shut down, rotate the 4 way valve to move the dashpot piston and open the PRV valve. Turbine gates shall remain shut. Expected movement of the pilot valve stem is 7/8 inch or more relative to the main piston and the main valve/disc travel should be 20 inches.

- (2) Return the 4-way valve to neutral

These test results will be compared to the rehabilitated PRV with the same test situations.

During all load rejection or PRV operations, the Contractor shall note any binding or stalling, and record the PRV disc and turbine shift ring location when binding occurs.

e. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements):

- (1) Test procedures and equipment list for pre-shutdown and pre-tear down testing operations and installations
- (2) Strip chart of test runs with proper documentation of test conditions
- (3) Assessment of leakage rates

f. Payment.- Payment for pre-shutdown measurements will be included in the lump-sum price bid therefore in schedule A or B, Item 3, which price shall include all labor, materials and equipment necessary for set-up of the strip chart recorder, pressure gauges, linear displacement transducers and measurements of the PRV during load rejections and other watered operations.

C.6.5 PRV DISASSEMBLY

a. General. –The Contractor shall disassemble all structural, mechanical, and electrical PRV components as necessary to refurbish and replace the items required by this contract. Machine condition readings shall be taken by the Contractor prior to shutdown and teardown. Procedures for disassembly and reassembly of the PRV shall be submitted to the Contracting Officer for approval. Any components destroyed or damaged in handling or during storage, as determined by the Contracting Officer, shall be replaced or repaired in a manner approved by the Contracting Officer, by and at the expense of the Contractor. The Contractor shall remove all disassembled components from the Powerplant as space is unavailable for overhaul or storage in the Powerplant.

b. Labeling and Match marking - Prior to and during the disassembly of the PRV, all parts shall be labeled and match marked using stamping or punch marked method to make sure they are installed in exactly the same position from which they were removed. The Contractor shall furnish all labor, materials, and equipment required for labeling and Match marking all parts as cited above.

c. Schedule/Procedure –The Contractor shall develop its own time/effort schedule and procedure for disassembly of the PRV. The Government will be disassembling/reassembling the Unit turbine at the same time the Contractor is working on the PRV. The Government will be using the Turbine Gallery crane (60 ton) for this work. Use of the main 300 ton powerplant crane can be scheduled, see subsection C.3.6. for use of Government crane, and used for disassembly of the PRV. The Government anticipates availability of the Unit N1 PRV on October 1, 2001 and Unit N2 PRV on October 1, 2002.

Disassembly will begin at the turbine end of the rod connection to the turbine shift ring and the rod connection at the dashpot cylinder extension. The Government will perform this part of the PRV disassembly as part of their own turbine disassembly work.

Procedures submitted for approval shall include Contractor's proposed method of establishing center and centering the plunger, main piston, seal rings and control valve seals.

d. Component Weights.-

Gate Ring Connecting Rod	1705-HJ-1 item 495	1700 pounds
Crosshead and Guide	1705-HG-1 item 431 & 433	1600 pounds
Piston Rod	1705-HJ-1 item 500	1050 pounds
Adjustable lever Assembly	1705-HL-1 item 541	6000 pounds, lever, adjusting block and pins
Dashpot Piston	1705-HG-1 item 430	1500 pounds
Dashpot cylinder	1705-HF-1 item 401	3000 pounds
Dashpot cylinder head	1705-HF-1 item 405	1700 pounds

e. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements) for approval:

- (1) Schedule of disassembly, rehabilitation and reassembly.
- (2) Procedure for disassembly, rehabilitation and reassembly, including centering and alignment of main piston, plunger and seals.
- (3) Check sheets documenting tear down dimensions.

f. Payment.- Payment for disassembly of the PRV will be included in the lump-sum price bid therefore in the schedule, Item 4 for disassembling of the PRV, which price

shall include all labor, materials and equipment necessary to disassemble the PRV and removing the components for rehabilitation from the Powerplant.

C.6.6 Furnishing Critical Components

a. General.- Due to the unknown condition of some internal critical components and the possible long lead times required to obtain replacements, Table A lists critical Components that shall be furnished rough machined. Upon disassembly of the PRV, the Contractor shall furnish an inspection report for each existing critical component which includes dimensions and condition. If any components dimensions exceed original drawing tolerances , a disposition report shall be furnished to the Government and the Government will determine whether the new parts shall be used or not. The Government will determine whether the new parts shall be used or not. If the fabricated parts are to be used the Contractor shall final machine parts to provide tight clearances between mating parts. Bid schedule includes sub bid items reflecting the furnishing of critical components and a separate, optional bid item for the final machining of the furnished critical components. Bid Schedules B, has optional bid items for furnishing of critical components as well as the final machining of critical components for Unit N2.

b. Components.-- If clearances between existing components are within drawing specifications and damage from contact or erosion is minimal and repairable, then existing components can be reused and the new, rough machined, fabricated parts will be turned over to the Government for use in other units. Springs will be replaced regardless of existing condition. If cleanup or repair is necessary to the mounting surfaces of the valve piston body, or spindle, the final dimensions of the replacement parts will be adjusted by the Contractor to reflect the new dimensions. Any components not used during the rehabilitation shall be turned over to the Government's representative at the Government Warehouse, Hoover Dam, labeled, tagged and boxed or skid mounted for outdoor storage. The following components shall be furnished by the contractor and shall be available to the contractor for replacement of damaged or out of tolerance existing components.

(1) Bushing, lower piston, sliding surface, sleeve , 1705-HP-1 item 387 , reference location 1 on USBR drawing 45-301-7666. The bushing is currently a 85 5 5 5 bronze, equivalent to ASTM-B584-00 C83600. Replacement part shall be machined from ASTM B271-96 UNS C93700. Rough machining shall provide sufficient excess material to allow a cleanup cut or repair to the receiving parts. Optional final machining shall achieve fit tolerances equivalent to the original assembly.

(2) Seat, lower piston, control valve tip 1705-HP-1 item 383 reference location 2 on USBR drawing 45-301-7666, The seat is a nitralloy steel, nitrided for hardness. Replacement parts shall be machined from a cast ASTM-A743-98 UNS-J92600 or forged ASTM-A-182-00 S30400 , Brinell hardness 200. Rough machining shall provide sufficient excess material to allow a cleanup cut or repair to the receiving parts. Optional final machining shall achieve fit tolerances equivalent to the original assembly.

(3) Seat, lower piston, control valve seat 1705-HP-1 item 381 reference location 3 on USBR drawing 45-301-7666 is a forged 18-8 stainless steel, alloy 302, nitrided for hardness. Replacement parts shall be machined from cast ASTM-A743-98 UNS-J92600 or forged ASTM-A743-98 S30400 , Brinell hardness 200. Rough machining shall provide sufficient excess material to allow a cleanup cut or repair to the receiving parts. Optional final machining shall achieve fit tolerances equivalent to the original assembly.

(4) Bushing, cylinder head to upper plunger, 1705-HB-1, item 336 reference location 4 on USBR drawing 45-301-7666 is currently a 85 5 5 5 bronze, equivalent to alloy ASTM B584-00 C83600. Replacement part shall be machined from ASTM B271-96 UNS C93700. Rough machining shall provide sufficient excess material to allow a cleanup cut or repair to the opposing or receiving parts. Optional final machining shall achieve fit tolerances equivalent to the original assembly.

(5) Bushing, pilot piston bearing to lower plunger, 1705-GW-1, item 268 reference location 5 on USBR drawing 45-301-7666 is currently a 85 5 5 5 bronze, equivalent to alloy ASTM B584-00 C83600. Replacement part shall be machined from ASTM B271-96 UNS C93700. Rough machining shall provide sufficient excess material to allow a cleanup cut or repair to the opposing or receiving parts. Optional final machining shall achieve fit tolerances equivalent to the original assembly.

(6) Bushing, cylinder head to supply pipe, 1705-HB-1, item 359 reference location 6 on USBR drawing 45-301-7666 is currently a 85 5 5 5 bronze, equivalent to alloy ASTM B584-00 C83600. Replacement part shall be machined from ASTM B271-96 UNS C93700. Rough machining shall provide sufficient excess material to allow a cleanup cut or repair to the opposing or receiving parts. Optional final machining shall achieve fit tolerances equivalent to the original assembly.

(7) Crosshead Pin, 1705-HJ-1, item 510, reference location 7 on USBR drawing 45-301-7666 Replacement part shall be fabricated from A193-00, Gr B7. Rough machining shall provide sufficient excess material to allow a cleanup cut or repair to

the receiving parts. Optional final machining shall achieve fit tolerances equivalent to the original assembly.

(8) Sleeve, 1705-GV-1, item 252 , 7-foot diameter split brass plate sleeve. reference location 8 on USBR drawing 45-301-7666 Optional final machining shall achieve fit tolerances equivalent to the original assembly. Final machining shall be in-place and shall be centered with the plunger and valve seats.

(9) Split Gland with 6 studs and nuts, for packing box of the main plunger, 1705-HB-1, item 341 and 342. Reference location 9 on USBR drawing 45-301-7666.

The PRV valve seats have been redesigned to simplify the valve and reduce cavitation. The following components are new and are not direct replacements of existing components, as such these components shall be installed and field machined.

(10) Seats, Ring, USBR dwg 45-301-7668, moving seat. reference location 10 on USBR drawing 45-301-7666. Ring shall be machined from cast ASTM-A743-98 UNS-J92600 or forged ASTM-A-182-00 S30400 , Brinell hardness 150 minimum. Ring shall be bolted to the needle body using new fasteners (item 14) in the existing bolt holes, ring shall be matched to the needle body to establish stud hole locations.

(11) Seal, Ring, USBR dwg 45-301-7668, stationary seal. reference location 11 on USBR drawing 45-301-7666 Ring shall be machined from cast ASTM-A743-98 UNS-J92600 or forged ASTM-A-182-00 S30400 , Brinell hardness 150 minimum. Ring shall be chilled and slipped into position with an interference fit.

(12) Apron, Ring, USBR dwg 45-301-7668, protective apron, reference location 12 on USBR drawing 45-301-7666 Ring shall be machined from cast ASTM-A743-98 UNS-J92600 or forged ASTM-A-182-00 S30400 , Brinell hardness 150 minimum. Ring shall be chilled and slipped into position with an interference fit .

(13) Discharge Liner, USBR dwg 45-301-7668, inner ring of air chamber, reference location 13 on USBR drawing 45-301-7666 Liner shall cast in one piece from ASTM-A-743-98 UNS92600 then saw cut in three equal sections to ease installation. Discharge liner shall seat against the seal ring (item 11) and shall be screwed into the embedded valve body as shown on the drawings.

(14) Fasteners, USBR dwg 45-301-7668, fasteners for the discharge liner and seat ring (item 10) and apron ring (item 12) , reference location 14 on USBR drawing 45-

301-7666. Fasteners shall be ASTM Grade 8 stainless steel, type and size as specified on dwg 45-301-7668.

The dashpot special valve 4780-C-1 incorporates two springs which shall be replaced in accordance with the spring specifications.

(15) Reclose valve spring, dashpot 4780-C-1 item 36 One required.
1 11/32 inch mean diameter to work in 1 3/8 inch hole , 3 inch height under 300 pounds, max solid height ,2 1/2 inch

(16) Reclose valve spring, dashpot 4780-C-1 item 34, 16 coils, #16 music wire 1/16" diameter, 25/32 inch inside diameter, working over 3/4 inch diameter, solid length 1 1/16" maximum.

Table A PRV Critical Components

Critical #	Description	Assembly of	Paragraph	Material
1	Bushing, lower piston, sliding surface, control valve piston	1705-HP-1 (387)	C.6.6.b (1)	Al-Bz
2	Seat, lower piston, control valve tip	1705-HP-1 (383)	C.6.6.b (2)	stainless 304
3	Seat, lower piston, control valve seat	1705-HP-1 (381)	C.6.6.b (3)	stainless 304
4	Bushing, cylinder head to upper plunger	1705-HB-1 (336)	C.6.6.b (4)	Al-Bz
5	Bushing, pilot piston bearing to lower plunger	1705-GW-1 (268)	C.6.6.b (5)	Al-Bz
6	Bushing, cylinder head to supply pipe	1705-HB-1 (359)	C.6.6.b (6)	Al-Bz
7	Crosshead Pin	1705-HJ-1 (510)	C.6.6.b (7)	A193
8	Sleeve	1705-GV-1 (252)	C.6.6.b (8)	brass
9	Split Gland	1705-HB-1(341)	C.6.6.b (9)	bronze
10	Seat Ring	45-301-7668	C.6.6.b (10)	stainless 304
11	Seat Ring	45-301-7668	C.6.6.b (11)	stainless 304
12	Apron Ring	45-301-7668	C.6.6.b (12)	stainless 304

13&14	Discharge Liner and fasteners	45-301-7668	C.6.6.b (13)&(14)	stainless 304
15	Reclose spring	4780-C-1 (36)	C.6.6.b (15)	spring wire
16	Reclose Spring	4780-C-1 (34)	C.6.6.b (16)	spring wire

c. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements) for approval:

- (1) Purchase Orders of critical components with drawings used for purchase.
- (2) NDE reports with defect mapping
- (3) Dimensional report of as shipped component dimensions

d. Payment.- Payment for critical components will be included in the itemized lump-sum prices bid therefore in each schedule, Item 5A, (and optional schedule 5B) for which price shall include all labor, materials and equipment necessary to furnish and deliver centrifugal castings, stainless steel castings and forgings, aluminum bronze castings and springs. The optional sub item (m) machined shall include all labor, materials and equipment necessary to final machine each critical component to match its mating surface. Only if the critical component is required for the rehabilitated valve shall the machining option be invoked and then only at the discretion of the Contracting Officer.

C.6.7 REHABILITATION OF PRV CONTROL VALVE

a. General.- Drawing 1705-GY-1 shows the assembly of the control valve. The 22-inch-diameter control valve functions as the pilot operator for the piston. The piston is held down (needle closed) until the pilot valve releases pressure from the topside of the piston. When pressure above the piston is released, the pressure below the disc moves the disc up and releases the flow from the turbine. The control valve is operated thru the turbine shift ring, dashpot, linkage and plunger. The control valve shall be disassembled and inspected for wear, corrosion, damage and any other abnormal conditions that may affect the reliability and or serviceability of the control valve. As a minimum all packings and gaskets shall be replaced and sliding surfaces honed, set screws and screws to lock bushings into position shall be replaced, the rehabilitated control valve shall be retested for leakage. Critical sealing surfaces (tip and seat) 1705-

HP-1 items 381 and 383 shall be fabricated and available for replacement. Other components to be fabricated will include the following bushings:

Cylinder head to plunger bushing 1705-HB-1 item 336

Cylinder head to supply pipe bushing 1705-HB-1 item 359

Pilot piston bearing bushing to plunger 1705-GW-1 item 268

Control valve piston to pilot piston bearing bushing 1705-HP-1 item 387

See Paragraph C.6.6, Furnishing Critical Components. If clearances of the existing components are within drawing specifications, the fabricated parts will be turned over to the Government for use in other units. Specifications for the existing PRV materials are given on the drawings. Drawings indicate the control valve piston and cylinder are QQ-S-681b class 2, cast steel. The control valve seats are Nitralloy. Bushings are Bronze 85 5 5 5 . If the exact composition of the material is necessary to determine a repair procedure, the Contractor shall perform a chemical analysis of a small sample of the PRV component being repaired. Steel surfaces exposed to water of the control valve piston and pilot piston bearing support shall be painted. See Painting paragraph C.7.1

b. Rehabilitation.--

(1) Control valve tip and seat.-- The control valve seat and tip (1705-HP-1 item 383 and 381) shall be inspected for damage and fit. Inspection report shall be submitted. If seat surfaces are in satisfactory condition the seat and seal shall be ground together to form a tight seat. Grinding shall remove less than a total of 0.05 inch between the two surfaces.

(2) Sliding surfaces of the control valve piston. – The clearance between the control valve piston and the control valve bearing shall be measured and recorded. A clearance greater than 0.024 inch shall require installation of the fabricated replacement of pilot piston bushing, 1705-HP-1 item 387. Pilot piston bearing bushing, 1705-GW-1 item 267 shall be honed as necessary to restore a clean, smooth surface to the stationary surface. The new sliding surface shall be turned to provide a 0.017 +.003 -.002 inch clearance between the parts.

(3) Sliding surface of the plunger.- The clearance between the plunger sleeve and the upper cylinder body and the pilot bushing bearing sleeve shall be measured and recorded. A clearance greater than 0.012 inch shall require installation of the fabricated replacement of 1705-HB-1 item 336, and 1705-GW-1 item 268. 1705-GZ-1 item 291, sliding surface of the plunger shall be turned as necessary to restore a clean, smooth surface to the sliding surface of the plunger. The new stationary surfaces shall be bored to provide a 0.005 +.004 -.000 inch clearance between the parts.

(4) Stem packing.-- Chevron packing shall be replaced at the plunger/cylinder head (1705-HB-1, item 346)

(5) Plunger link bushing – The top connection of the plunger 1705-GZ-1, item 290 is bushed (item 293) with a pin connection (298) to the links (296). A clearance greater than 0.015 inch shall require a disposition report prior to fabricating a new link pin (item 297). If a new link pin is required it shall be oversize to provide a 0.010 inch clearance with the bored out bushing of the plunger (1705-GZ-1, item 293 and the link pin 1705-GZ-1, item 297.

c. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements):

- (1) Examination reports of damage and corrosion of components and as found clearance measurements
- (2) Deviation reports and repair procedures, if necessary
- (3) Clearances of rehabilitated components

d. Payment.- Payment for rehabilitation of control valve will be included in the lump-sum price bid therefore in the schedule, Item 6 , which price shall include all labor, materials and equipment required to rehabilitate the PRV control valve, piston, plunger and associated bushings. Payment for surface preparation and painting of steel surfaces exposed to water of the control valve will be included in the lump-sum price bid therefore in the schedule A or B Item 6.

C.6.8 REHABILITATION OF OPERATING LINKAGE, PRV

a. General- All bushings of the operating linkage shall be measured, rehabilitated by honing and reassembled. Linkages (arms, rods and pins) shall be inspected for wear, corrosion, damage and any other abnormal conditions that may affect the reliability and or serviceability, cleaned and painted.

b. Rehabilitation- The inner diameter surface of all bushings shall be honed. The bushings shall be checked for wear, concentricity and damage, clearance shall be calculated from measurements of opposing bearing surfaces. If clearances exceed maximum allowable from what is shown on the drawings, a deviation report shall be submitted to the Government with repair and replacement options and pricing.

The following bushings and pins shall be examined:

- (1) connecting rod to shift ring, rod end pins
- (2) connecting rod to crosshead, cross head pin

- (3) crosshead and guide
- (4) rocker shaft bearing
- (5) link bushings

Connecting rods, piston rod, links and pins - The eye end of the relief valve connecting rod 1705-HJ-1 (item 507) is bushed for connection to the crosshead (1705-HG-1) using crosshead pin (item 510). A new crosshead pin is required as a critical component , the pin shall be furnished oversize. See Para C.6.6.b(7). During final machining the pin shall be turned to provide a clearance of 0.005 inches with the restored bore thru the crosshead and the bushing in the connecting rod. The relief valve connecting rod is threaded with two collars fixing the length of the rod relative to the link (item 514). The threaded end of the rod should be chased to clean the threads and the collars (item 509) and stop nut (item 505) chased. The link (item 514) is a four piece component that is bored for connection with the Relief Valve Connecting Rod (item 507) on the end toward the dashpot and clamps over the adjusting arm trunnion (1705-HL-1 item 548) on the other end. The block (1705-HJ-1, item 516) should be examined for damage and the bore diameter of the block checked against the pin diameter for gate ring connecting rod for wear (1705-HJ-1, item 498). The link is bushed with two bronze sleeves (item 515). A clearance greater than 0.010 inch shall require a disposition report . Bushings should be bored to have an appropriate clearance (0.005 inch on the diameter) with the final diameter of the gate ring connecting rod pin (item 498). During final machining the pin shall be turned to provide a clearance of 0.005 inches with the restored bore thru the bushings in the connecting rod.

Adjusting lever - Adjusting lever 1705-HL-1 connects the output of the dashpot to the control valve /main valve linkage. The adjusting lever bolts on to the end of the rocker shaft and has a bearing surface on the outside. The rocker shaft/adjustable lever system is provided with three bearings. Two on the rocker shaft and the third on the adjustable lever. The bearing surface should be shimmed to correct for wear and misalignment and trued as a system with the bearing surfaces of the rocker shaft. The trunnion (item 548) slides within the slot of the adjusting lever. The trunnion is threaded and is adjusted by the adjusting screw (item 543) and locked with collars. A split link 1705-HJ-1 (item 514) clamps over the bearing surfaces of the trunnion. The adjusting lever slot and trunnion should be restored to a close sliding clearance of .002-.005 inch. Trunnion surfaces should be square and true. Adjusting screw and trunnion threads shall be chased.

Rocker Shaft - Bearing and lever supports and levers 1705-HM-1 should be in good condition, wear will be present on the rotating surface bushings. Bushing (item 569) is part of the rocker shaft bearing (item 568). The bushing is bronze, 18.254 inch OD and 17.010 inch ID, 16 inch long with grease grooves. The rocker shaft is held in a split

bearing support cast into the top of the cylinder head 1705-HB-1. The split bushings 1705-HB-1 item 333, shall be shimmed. Bearing surfaces of the rocker shaft should be inspected and skim cut, then shimmed, split bushings should be bored to match after the bearing shaft is restored. The lever is a shrink fit to the rocker shaft and then was keyed with a 3 inch dowel, 19 3/4 inch long. The bushing (1705-HM-1, item 567) in the lever (item 565) is 8.254 inch dia +0.000 -0.001 OD and 7.010 inch dia +.000 - .001 ID. Bushing is 6 3/8 inch long with a grease hole. A 3/8 inch set screw (item 376) secures the bushing to the lever. A clearance greater than 0.015 inch shall require a disposition report prior to fabricating a new link pin 1705-GZ-1, item 297. If a new link pin is required it shall be oversized to provide a 0.010 inch clearance with the bored out bushing of the lever (1705-HM-1, item 565) and the link pin (1705-GZ-1, item 297).

c. Painting.- Rods, levers and arms shall be sand blasted to near white metal and painted in accordance with Paint C.7.1.

d. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements) for approval:

- (1) Examination reports of damage and corrosion of components and as found clearance measurements
- (2) Deviation reports and repair procedures, if necessary
- (3) Clearances of rehabilitated components

e. Payment.- Payment for rehabilitation of PRV operating linkages will be included in the lump-sum price bid therefore in schedule A or B, Item 7), which price shall include all labor, materials and equipment necessary for rehabilitation of the linkages, associated bearing surfaces and pins. Payment for surface preparation and painting of operating linkages will be included in the lump-sum price bid therefore in the schedule A or B Item 7.

C.6.9 REHABILITATION OF DASHPOT, PRV

a. General.-- The dashpot and dashpot control valves are the devices which allow the PRV disc to open with a fast turbine gate closure but with a normal, slow, gate movement, the PRV does not open. An adjustable check valve is incorporated within the dashpot system. Check valves shall be disassembled and springs replaced and seats ground. New hydraulic oil shall be furnished and the dashpot refilled. The dashpot will be rehabilitated and the operational tests conducted after reassembly. External surfaces of the dashpot cylinder, dashpot support and dashpot piping shall be painted. See Painting paragraph C.7.1

b. Rehabilitation.- The dashpot piston assembly consists of the piston with three piston rings, piston rod, two check valves and cylinder of the piston. The dashpot piston assembly shall be disassembled, cleaned, inspected and refurbished. Overhaul of the piston shall entail an examination of the dashpot cylinder bore for wear and damage, measurement of the existing clearances, cleanup of the bore by honing, and installation of new main rings. All oil passages shall be cleaned and examined for damage, passages shall be unobstructed and smooth. Interconnecting piping shall be replaced. Piston with refurbished check valves and piston rings shall be pressure tested, and leak tested with the dashpot cylinder prior to reassembly into the PRV. Contractor shall submit pressure and leak test plan to the Government. Contractor shall submit results of the leak tests. A clearance greater than 0.010 inch or damage to the cylinder shall require a defect report for disposition by the Government including options for repair, replace and pricing. Piston rod shall be examined for wear and damage, threads shall be chased and cleaned.

The 2" angle check valve with adjustable stop (4780-D-2) is a commercial valve. The valve bypasses oil around the dashpot piston and allows the gates to open and the PRV to remain closed. The valve is meant to have full stroke (open) on normal gate opening. Valve disk, seat, spring and packing shall be replaced. Valve body, threads, gland and stem to be examined and if damaged, a deviation report shall be submitted to the Government with repair and replacement options and pricing.

The 1 1/4 inch Special Valve (4780-C-1) determines the re-close rate of the PRV valve. The piston stem adjusts the travel height of the valve disk. The special valve shall be examined and number of turns open shall be noted. Valve shall be disassembled, cleaned and examined for wear. Valve disc and seat shall be lapped. The conical shape of the valve disc shall be restored or replaced to assure a tight fit and linear flow rate. Compression springs and packing rings shall be replaced. Threads shall be chased and cleaned.

c. Materials.- Piston rings shall be high density polypropylene middle ring/seal. Main rings shall be cast iron. Valve packings, seals and gaskets shall be commercial items, non-asbestos.

d. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements) for approval:

- (1) Examination reports of damage and corrosion of components and as found clearance measurements,
- (2) Deviation reports and repair procedures, if necessary, check valve pressure leak test plan, and test results.
- (3) Clearances of rehabilitated components
- (4) Pressure and leak test plan

(5) Leak test results

e. Payment.- Payment for rehabilitation of dashpot will be included in the lump-sum price bid therefore in schedule A or B, Item 8, which price shall include all labor, materials and equipment necessary for cleaning, honing, cylinder, replacing piston rings, rebuilding check and re-close valves and interconnecting piping. Payment for surface preparation and painting of exterior surfaces of dashpot, dashpot cylinder, piping and support will be included in the lump-sum price bid therefore in the schedule A or B Item 8.

C.6.10 REHABILITATION OF PISTON AND CYLINDER HEAD , PRV

a. General.--The 7 foot-diameter piston is the primary device holding the disc closed. The main valve is held down (needle closed) until the 22" control valve releases pressure from the topside of the piston. When pressure is released, the pressure unbalance on the piston moves the needle up and releases the flow from the turbine. Drawing 1705-GY-1 shows the assembly of the piston and control valve. A 2 ½ inch supply pipe supplies pressure to the top of the 22" control valve piston to provide a positive re-closing force to the control valve. While the mechanical linkage from the servomotor displaces the control valve, the water pressure acts to restore the control valve. Similarly the 10 inch angle valve provides a throttled quantity of water to makeup leakage when the valve is closed but not enough to keep the valve closed when the control valve opens.

b. Disassembly- The cylinder head and piston shall be disassembled, cleaned and inspected for wear and damage. NDE, magnetic particle examination shall be made.

c. Rehabilitation- As a minimum, all packings and gaskets shall be replaced and sliding surfaces honed. Set screws, bushing fasteners and cylinder head fasteners shall be replaced as it is likely they will be inadvertently damaged during removal. Additionally, critical plunger bushings, guides and the 7-foot-diameter sleeve shall be fabricated and available for replacement. See paragraph C.6.6 (Furnishing Critical Components). Piston surfaces, cylinder head and pilot piston bearing, except metal to metal contacting surfaces, shall be sand blasted to near white SSPC-10 and painted. See Paint paragraph C.7.1. The existing clearance between the 7-foot-diameter piston dwg 1705-GW-1 , and the piston liner, dwg 1705-GV-1 item 252 shall be measured and recorded. Concentricity of the piston, liner, head cover plunger bushing and valve seats shall be recorded during disassembly. Damage to the cylinder liner and/or piston shall be noted and a defect report provided to the Government. Cylinder liner shall be restored to a surface condition compatible with tight operation of piston rings or the replacement liner will be installed. Concentricity is extremely important and the

Contractor shall establish center and restore complete concentricity of the valve. Contractor shall provide a suitable boring bar to accurately machine the stationary surfaces.

The following bushings shall be removed to allow examination of the mounting metal:

- 1) 7-foot-diameter brass sleeve
- 2) plunger guides,

Rings and glands shall be examined for damage and packing shall be replaced at the plunger/cylinder head and the indicator column.

Rubber seal rings were provided to prevent seepage between mating parts and shall be replaced.

The following surfaces shall be painted (See paragraph C.7 Paint):

- 1) exterior surfaces of the cylinder head
- 2) interior water bearing surfaces of the cylinder
- 3) top, water bearing surfaces of the piston

d. Materials- Specifications for the existing PRV materials are given in the drawings. Drawings indicate the plunger is rolled steel, piston is cast steel , current designation would be similar to ASTM A27-95, 7-foot diameter cylinder is ½ inch brass plate and the plunger bushings are Bronze 85 5 5 5 . If the exact composition of the material is required for development of a repair procedure, the Contractor shall perform a chemical analysis of a small sample of the PRV component being rehabilitated.

e. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements) for approval:

- (1) Examination reports of damage and corrosion of components and as found clearance measurements
- (2) Deviation reports and repair procedures, if necessary
- (3) Procedures for establishing valve center and method of in-place machining to assure concentricity of valve components.
- (4) Concentricity measurements and clearances of rehabilitated components

f. Payment.- Payment for rehabilitation of the main piston/cylinder head of the PRV will be included in the lump-sum price bid therefore in schedule A or B, Item 9, which

price shall include all labor, materials and equipment necessary for disassembly, cleaning, examination, rehabilitation and measurements of the main piston. Payment for surface preparation and painting of water bearing surfaces of the top of the main piston, underside of piston cylinder head and exterior surface of piston cylinder head will be included in the lump-sum price bid therefore in the schedule A or B Item 9.

C.6.11 REHABILITATION AND CAVITATION REPAIR OF BODY (HIGH PRESSURE SIDE) AND BODY SEAT

- a. General.--The valve piston is the primary closure device. Stationary seats on the valve body and seals on the lower piston shall be replaced with the redesigned seats.
- b. Repair and preparation. The interior of the cast steel valve body upstream of the existing valve seats are extensively cavitated and corroded. As shown on drawing 45-301-7667, the repair work is categorized into zones.

Zone A - Main valve body (water side) - Repair cavitation and corrosion damage with mild steel, surface preparation and paint. 50 pounds of weld metal anticipated.

Zone B - Stainless Steel overlay. The Zone B surface shall be prepared for overlay welding by uniformly removing the surface 1/4" below finish surface level, grinding or milling shall be used as the valve body vanes prevent a boring bar in this area. About 25% of the surface of Zone B will be cavitated or corroded deeper than 1/4". These areas will be locally ground out and filled to within 1/4" of the finished surface with mild steel weld wire. After the deeper holes have been prepared and filled then the entire Zone B will be overlaid with E309L. Its expected that 150 lbs of mild steel and 50 lbs of S.S. weld metal will be required. Surface shall be a smooth hydraulic curve transitioning from Zone A to Zone B. Contractor shall grind surfaces to smooth contours to reduce possibility of discontinuities creating cavitation sources in the future. Welding in Zone B may distort the body and work in zone B shall be completed prior to seat boring to allow for correcting for any valve body distortions from welding.

Zone C - Zone C is the location of the apron ring USBR drawing 45-301-7667. This is a redesigned stainless steel ring which shall be shrink fit into a seat machined into the valve body. Contractor shall use an in-place boring machine to bore out the seat for the apron ring. See drawing 45-301-7668. Contractor shall use tight wires to center the boring bar. Repair welding in Zones A, B and E, below and above Zone C shall be completed prior to completion of the seat boring to allow for correcting for any valve body distortions from welding. The apron ring shall be an

interference fit into the valve body seat and the apron ring shall be installed prior to Zone D work.

Zone D - Zone D is the location of the body seat ring, USBR drawing 45-301-7667. This is a redesigned stainless steel ring which shall be shrink fit into the existing seat in the valve body. The boring bar shall be setup to center the bore, cleanup the support surface including the area of the seat in the apron ring and match the proper diameter for an interference fit between the valve body/apron ring and the body seal ring.

Zone E - Zone E is the existing liner area. The discharge liner shall be removed and a redesigned liner (USBR drawing 45-301-7668) shall be screwed into Zone E. The liner shall form an air chamber for air admission to the seats.

Zone M - Zone M is the embedded, cast steel support for the discharge liner. The support shall be examined and a disposition report submitted on its condition. It is anticipated that 5 pounds of mild steel weld material will be required to restore the condition of the support. The boring bar shall be setup to center the bore, cleanup the support surfaces that the discharge liner will contact. Zone M shall be surface prepared and non-machined surfaces shall be painted, see paragraph 7.1 (Painting)

d. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements) for approval:

- (1) Examination reports of damage and corrosion of components and as found clearance measurements
- (2) Deviation reports and repair procedures, if necessary
- (3) As-built dimensions of seats and seals

e. Payment.- Payment for rehabilitation of PRV valve body will be included in the lump-sum price bid therefore in schedule A or B, Item 10, which price shall include all labor, materials and equipment necessary for examination, cleaning, disassembly of body seats and discharge liner, filler welding, overlay welding, in-place machining of seats, seat supports and replacement of seats and final measurements of seat clearances. Payment for surface preparation and painting of Zones A and M will be included in the lump-sum price bid therefore in the schedule A or B Item 13.

C.6.12 REHABILITATION AND CAVITATION/CORROSION REPAIR OF MAIN PISTON (LOWER) AND PISTON SEAL RING

a. General.--The main piston (lower) is the primary closure device. The seat on the lower piston shall be replaced with a redesigned seat ring , drawing 45-301-7666A, item 10.

b. Repair and rehabilitation. The seat flange shall be restored, a new seat ring installed. The interior and exterior of the main piston (lower) shall be sand blasted and painted. As shown on drawing 45-301-7667A, the repair work is categorized into zones.

Zone F - Zone F is the interior of the main piston below the 22" control valve. This area is corroded and about 5% of the surface area requires additional grinding and filling of the cavities greater than 3/8" depth with weld metal. Mild steel fill welding followed by surface preparation and painting will be adequate for this zone. 50 pounds of weld metal anticipated.

Zone G- Zone G is the exterior of the lower piston. This surface of the piston is in the high pressure waterway upstream of the valve seats. This area is corroded and about 5% of the surface area requires additional grinding and filling of the cavities greater than 3/8" depth with weld metal. Mild steel fill welding followed by preparation and painting will be adequate for this zone. 30 pounds of weld metal anticipated. This zone will be surface prepared and painted.

Zone N - Zone N is on the exterior of the lower piston between Zone G and the moveable seat. This zone will have a stainless steel overlay. The Zone N surface shall be prepared for overlay welding by uniformly removing the surface 1/4" below finish surface level. About 25% of the surface of Zone N will be cavitated or corroded deeper than 1/4". These areas will be locally ground out and filled to within 1/4" of the finished surface with mild steel weld wire. After the deeper holes have been prepared and filled then the entire Zone N will be overlaid with E309L. Its expected that 5 lbs of mild steel and 20 lbs of stainless steel weld metal will be required. Surface shall be a smooth hydraulic curve transitioning from Zone G to the moveable seat. Contractor shall grind surfaces to smooth contours to reduce possibility of discontinuities creating cavitation sources in the future. Welding in Zone N may distort the piston and work in zone N shall be completed prior to seating the moveable seat to allow for correcting for any piston body distortions from welding.

Zone H - Zone H is the lower, moveable needle. The existing needle has a nitrided valve seal held in place with the deflector and the deflector tip. What remains of the deflector and deflector tip and needle seal shall be removed, these pieces will not be reused as the seat ring for the needle has been redesigned, USBR drawing 45-301-7668. The needle seat surface for the seat ring shall be examined and the surface repaired and turned flat, the bolt holes shall be chased and bolt hole locations matched to the new seat ring. This work shall be done after the overlay welding of Zone N is completed. The needle body and needle seal shall be ground to provide a hydraulically smooth surface. Care shall be taken to avoid contamination of the stainless seal with carbon steel grinding tools. Using new SAE Grade 8, stainless steel studs and nuts, the seal ring shall be attached to the needle. Attachment nuts shall be tack welded to prevent nuts from loosening and the ring becoming detached.

- c. Cavitation damage examination.-- The Contractor shall provide a checklist to ensure that all parts of the PRV are inspected and that all areas of cavitation damage are recorded on sketches or in tabular form prior to repairing the damage. The chamber shall be divided in zones or quadrants and damage report locations shall refer to those zones.

The records shall include the following:

- (1) Date of examination
 - (2) Overall area of pitting, as well as the average depth and maximum depth.
 - (3) Dimensions and locations of structural damaged areas
 - (4) Digital photographs of the damaged area and of subsequent repairs.
- Reference number and dimension of pitted area shall be marked and visible in the digital photo. (.Jpg or .bmp format)

In addition, the Contractor shall also check for corrosion, cracks, or other damage. The Contractor shall notify the Government of any flaws or damage when found.

- d. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements) for approval:

- (1) Examination report and cavitation mapping
- (2) Repair plan and weld repair procedures

- e. Payment.- Payment for rehabilitation of PRV piston (lower) will be included at the unit price bid therefore in schedule A or B, Item 11, which price shall include all labor, materials and equipment necessary for repairing the lower piston, and restoring the seal

flange. Payment for surface preparation and painting of Zones F and G will be included in the lump-sum price bid therefore in the schedule A or B Item 11.

C.6.13 REPAIRING CAVITATION/CORROSION DAMAGE TO PRV ENERGY DISSIPATERS

a. General.-- The Contractor shall repair cavitation/corrosion pitting damage to the PRV energy dissipaters. The contractor shall restore the PRV energy dissipaters within the water passages to a hydraulically smooth condition, free from hollows, depressions, cracks, or projections that might cause incipient cavitation or pitting.

b. Cavitation damage examination.-- The Contractor shall provide a checklist to ensure that all parts of the PRV are inspected and that all areas of cavitation damage are recorded on sketches or in tabular form prior to repairing the damage. The chamber shall be divided in zones or quadrants and damage report locations shall refer to those zones.

The records shall include the following:

- (1) Date of examination
 - (2) Overall area of pitting, as well as the average depth and maximum depth.
 - (3) Dimensions and locations of structural damaged areas
 - (4) Digital photographs of the damaged area and of subsequent repairs.
- Reference number and dimension of pitted area shall be marked and visible in the digital photo. (.Jpg or .bmp format)

In addition, the Contractor shall also check for corrosion, cracks, or other damage. The Contractor shall notify the Government of any flaws or damage when found.

c. Plan and repair method.-- The contractor shall perform an examination and assessment of the damage of the PRV and submit a recommended plan and method for repairing the damage to original conditions.

Zone I - The zone includes the two feet directly below the valve body liner , The surface has an overall thin corrosion with 10 % of the surface more deeply pitting require fill. Cavitation/corrosion deeper than 1/4 inch shall be ground to good steel and fill welded with mild steel weld metal, before grinding to restore a smooth hydraulic surface. The Government estimates 25 pounds of weld metal to repair the Zone I of the valve. The entire zone shall be sand blasted and painted. See Paint paragraph C.7.1

Zone J - The zone covers the remainder of the tube and shall be sand blasted and painted.

Zone K - The energy dissipater structure is corroded deeper than 1/8" over 10% of this zone, Deeper pits shall be ground out and filled with carbon steel weld metal, prior to sand blasting and painting. The Government estimates 250 pounds of weld metal to repair the Zone K

Zone L - The bottom of the dissipater structure shall be sand blasted and painted. 25 pounds of weld metal anticipated where seam welds and voids need to be filled.

Contractor shall grind surfaces to smooth contours to reduce possibility of discontinuities creating cavitation sources in the future. Carbon steel surfaces of the energy dissipaters shall be surface prepared and painted in accordance with C.7.1 Paint.

d. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements) for approval:

- (1) Examination report and cavitation mapping
- (2) Repair plan and weld repair procedures

e. Payment.- Payment for cavitation repairs will be included at the unit price bid therefore in schedule A or B, Item 12, which price shall include all labor, materials and equipment necessary for volume of cavitation repaired. Payment for surface preparation and painting of Zones I, J, K and L will be included in the lump-sum price bid therefore in the schedule A or B Item 13.

C.6.14 TESTING OF REHABILITATED PRV

a. General .-- The rehabilitated PRV shall be dry tested, manually tested and load rejection tested in 25% increments to 100% load to assure the Government of proper operation and setup of the operating linkages, dashpot re-close, control valve linkages, auxiliary space operation, general performance of the rehabilitated valve and leakage rates.

Testing shall be accomplished in 4 phases:

- (1) Dimension checks of linkages, valves, settings.
- (2) Dry-run operation without watering up the turbine
- (3) Watered up PRV, manual operation of PRV control valve, check of binding, re-close rate, operation, leakage assessment

- (4) Load rejection tests, watered, turbine operational, 25%, 50%, 75% and 100% of full load.
- b. Contractor shall develop a phased test plan similar to the pre-shutdown and pre-tear down testing of the PRV paragraphs C.6.3 and C.6.4. Each phase of testing must be witnessed and accepted by the Government before proceeding to the next test phase.
- c. Submittals - The Contractor shall submit the following in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements) for approval:
 - (1) Test procedures and equipment list for operational testing
 - (2) Data Sheets with recorded measurements Phase 1
 - (3) Condition report of dry-run
 - (4) Strip chart of manual test runs with proper documentation of test conditions
 - (5) Assessment of leakage rates
 - (6) Strip chart of load rejection test runs with proper documentation of test conditions and any as-left settings.
- d. Payment - Payment for testing will be made at the lump sum price bid therefore in schedule A or B ,Item 14 which price shall include all labor, materials and equipment necessary for testing the PRV valve and providing the required test reports.

SUBSECTION C.7 - COATINGS

C.7.1 COATINGS, GENERAL

a. General. - The Contractor shall submit all purchase orders, manufacturer's product data and application sheets, and certifications; furnish all materials; clean surfaces; and apply the approved protective coatings in accordance with this paragraph and paragraph C.7.2 (Coating Tabulations). All exterior paint's colors shall be matched with the existing PRV colors.

Coating materials required by these specifications, but are not covered or listed in the coating tabulations, shall be subject to certification, sampling, and testing in accordance with subparagraph c. (Coating Materials Approval) below. Methods of surface preparation and application shall be in accordance with the manufacturer's instructions and the general requirements of these specifications.

(1) Protection of newly coated, adjacent surfaces, and equipment. - Items or surfaces not to be coated, but which are adjacent to surfaces to be cleaned and coated, shall be protected against contamination and damage during the cleaning and coating operations. This includes surfaces and equipment which are subject to contact by airborne contaminants as well as those which are in physical contact with the areas being cleaned or coated. Examples include: vehicles, light fixtures, mechanical and electrical equipment, nameplates, and wet and newly coated surfaces.

Newly coated items shall not be moved until the coating is dry through. A coating film shall be considered dry through when it cannot be distorted or removed by exerting substantial, but less than maximum, pressure with the thumb and turning the thumb through 90 degrees in the plane of the coating film.

(2) Interior coating of machinery and equipment. - Unless otherwise specified, the Contractor will not be required to disassemble machinery, equipment, or other metalwork for the purpose of coating the interiors.

(3) Compatibility. - Coating system components shall be compatible products of the same manufacturer.

(4) Damage caused by the Contractor. - Any items or surfaces which are in the Contracting Officer's opinion damaged or contaminated by the Contractor's

operations shall be returned to their original condition by and at the expense of the Contractor.

Before top coating any coated surfaces, the Contractor shall reclean any exposed surfaces and apply coating materials as necessary to restore damaged or defective surfaces to the specified condition. Manufacturer coated equipment shall be restored to the original appearance of the equipment by appropriate methods.

Temporary or permanent welding for the convenience of the Contractor shall not be permitted on areas where the welding will damage other protective coatings, unless the areas of coatings which would be damaged are accessible for repairing and inspection.

- b. References. - The publications with the approval or revision date listed below form a part of this specification to the extent referenced:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

Standard	Title
ASTM A 380-99	Standard Practice for Cleaning, Descaling, and Passivation of Stainless Steel Parts, Equipment, and Systems
ASTM D 522-93	Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings
ASTM D 870-97	Standard Practice for Testing Water Resistance of Coatings Using Water Immersion
ASTM D 1141-98	Standard Specification for Substitute Ocean Water
ASTM D 2244-93	Standard Test Method for Calculation of Color Differences From Instrumentally Measured Color Coordinates
ASTM D 2794-94	Standard Test Method for Resistance to Organic Coatings to the Effects Rapid Deformation (Impact)
ASTM D 3359-97	Standard Test Methods for Measuring Adhesion by Tape Test

Standard	Title
ASTM D 3363-92	Standard Test Method for Film Hardness by Pencil Test
ASTM D 4060-95	Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
ASTM D 4541-95	Standard Test Method for Pull-Off Strength of Coating Using Portable Adhesion Testers
ASTM D 5532-94	Standard Specification for Micaceous Iron Oxide Pigments Paint

SOCIETY FOR PROTECTIVE COATINGS (SSPC)/NACE INTERNATIONAL (NACE)

Standard	Title
NACE RP 0188-99	Standard Recommended Practice - Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates
NACE RP 0287-95	Standard Recommended Practice - Field Measurement of Surface Profile of Abrasive Blast Cleaned Steel Surfaces Using a Replica Tape
SSPC-AB1-91	Abrasive Specification No. 1 - Mineral and Slag Abrasives
SSPC-PA2-96	Measurement of Dry Paint Thickness with Magnetic Gages
SSPC-SP10/NACE No. 2-94	Joint Surface Preparation Standard - Near-White Blast Cleaning
SSPC-SP12/NACE No. 5-95	Joint Surface Preparation Standard - Surface Preparation and Cleaning of Steel and Other Hard Materials by High- and Ultrahigh-Pressure Water Jetting Prior to Recoating.
SSPC-VIS 1-89	Visual Standard for Abrasive Blast Cleaned Steel (Standard Reference Photographs)

SSPC-VIS 4(I)/ NACE No. 7-98	Interim Guide and Visual Reference Photographs for Steel Cleaned by Water Jetting
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c. Coating materials approval. -

(1) General. - The Contractor shall submit for approval, complete and legible copies of product data and application sheets, purchase orders, material certifications, and related materials and qualification of coating applicators, as specified herein. At the Contractor's option, the RSN for coatings may be divided into several individual submittals composed of one or more materials. Each submittal will be reviewed for approval individually.

Product data and application sheets, purchase orders, required certifications, MSDS, and other submittals, shall be submitted in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements).

(2) Submittals. - other submittals, shall be submitted in accordance with this paragraph and paragraph C.1.3 (Submittal Requirements).

(2) Submittals. -

(a) Transmittal letter. - In addition to the requirements of paragraph C.1.3 (Submittal Requirements), the Contractor's Transmittal Letter shall identify each item to be coated for each submittal and resubmittal and shall include the following information:

(aa) Coating tabulation number.

(bb) Item name or sub-letter and sub-number of the specific item to be coated.

(cc) Material name or material option number in tabulation to be applied.

(b) Product data and application. - Manufacturer's product data and application sheets for coating material to be applied.

(c) Purchase orders. - Purchase orders shall contain the following information for the represented material:

(aa) Supplier's name, address, and phone number, purchase order number, and purchase order date.

(bb) Manufacturer's name, address, and phone number.

(cc) Batch number(s) for each material, except thinners.

(dd) Quantities ordered for each material, except thinners.

(d) Manufacturer's certification of compliance. -

(aa) The certification shall state that the material is of the same composition and formulation to meet physical and performance test results for one of the following:

1. Submitted batch or previously tested batch materials complies with these specifications.

2. Submitted batch materials are unchanged from previously tested batch materials that complies with manufacturer's quality control (QC) and quality assurance (QA) programs.

3. Submitted batch materials complies with manufacturer's quality control (QC) and quality assurance (QA) programs as listed on product data and application sheets.

(bb) Manufacturer's certification of compliance for represented material shall contain following information:

1. Manufacturer's name, address, and phone number for each material.

2. Batch number(s) for each material, except thinners.

3. Quantities ordered for each material, except thinners. Quantity of entire batch manufactured is not acceptable, unless entire batch is greater than or equal to the quantity delivered to the Project site.

4. Signed and dated by manufacturer's technical representative.

(e) Specific material certification of compliance and documentation. - The Contractor shall submit the following specific manufacturer/supplier certification of compliance or other specific documentation for the following materials:

(aa) Abrasive materials. - Abrasive materials used in surface preparation shall be certified in accordance with subparagraph C.7.1.e (Preparation of surfaces).

(bb) Micaceous iron oxide (MIO). - Materials containing MIO products shall be certified in accordance with subparagraph C.7.1.d (Materials).

(f) "Or equal" material. - The Contractor may propose to use an "or equal" material for a "brand name or equal" product specified and described by a coating category. The "or equal" material will be evaluated on material composition, surface preparation, and plan of application. The Contractor shall submit the following data and documentation:

(aa) Product data and application sheets.

(bb) Manufacturer's certifications.

(cc) Performance capabilities to meet or exceed the requirements listed in the associated coating category.

(dd) Manufacturer's certified test reports for coating or coating system substitution to equal or exceed the appropriate category performance requirements.

(ee) Certified testing reports from an independent laboratory.

(g) Qualification of coating applicators. - Each coating applicator shall be either trained or skilled and experienced in the application of each coating material which they will apply under this contract. The Contractor shall submit written evidence that each coating applicator meets the special standards of responsibility listed below for each coating material applied.

The Contractor shall submit for approval either (aa) or (bb) requirements for each applicator and coating material as follows:

(aa) Data showing the applicator has successfully completed training in the use of the coating material on applications similar to those specified in these specifications.

(bb) Data showing that the applicator is skilled and experienced in the application of the coating material under conditions and with materials similar to those specified in these specifications.

d. Materials. - Materials shall meet or exceed the salient characteristics for composition, physical, and performance requirements listed in the coating categories in paragraph C.7.2 (Coating Tabulations and Categories).

(1) Containers. - All materials shall be purchased in containers not larger than 5 gallons as packaged by the manufacturer unless the Contractor is equipped at the coating site to handle and thoroughly mix coatings which are delivered in larger containers. All materials shall be delivered to the jobsite in their original unopened containers labeled with the manufacturer's name, brand, batch number, date of manufacture, and any special instructions. Damaged, leaking, or unlabeled containers shall be rejected and removed from the jobsite.

(2) Shelf life of coating material. - Coating material shall not be used that exceeds the manufacturer's specified storage stability period. Materials with expired shelf life shall be removed from the jobsite.

(3) Volatile organic compounds (VOC). - The volatile organic compound (VOC) content of all specified coatings systems shall not exceed the maximum VOC content permitted by Federal, State, and local air pollution control regulations. VOC content for the individual coatings or coating systems are listed in the coating categories and are identified as either "as supplied" or "reduced for spray." Thinning of coating material shall not exceed the allowable maximum VOC limit.

(4) Abrasives. - The abrasives used to prepare the specified surfaces shall meet the requirements of SSPC-AB 1. The abrasives shall be either Type I or Type II, Class A material. Abrasive material shall not exceed toxicity threshold limits for hazardous metals. The abrasive's grade shall be the grade required to produce the surface profiles specified or recommended by the manufacturer.

(5) Micaceous Iron Oxide (MIO) products. - Coating materials containing MIO products shall conform to ASTM D 5532, Type 1, at 80 percent minimum lamellarity, 85 percent minimum iron (III) oxide (Fe_2O_3) content with soluble salt content less than 0.04 percent.

e. Preparation of surfaces. - For metallic or coated surfaces in which surface preparation has been completed but the substrate has flash rusted, corroded, become contaminated, or improperly cured, the Contractor shall re-clean or perform additional surface preparation to the requirements of this paragraph.

(1) Surface profile. -

(a) Specified surface profile. - Where abrasive blasting is specified for a given service environment, the profile shall be as recommended by either the coating's manufacturer(s) or as specified in the coating category or tabulation.

(b) Non-specified surface profile. - Where the surface profile is not specified, the blasted surface shall have the following profile for the listed service environments:

(aa) Atmospheric. - 1 mil or greater angular profile and shall be less than the specified millage of the first applied coat.

(bb) Burial and immersion. - Angular profile between 1.5 to 3-mils.

(c) Testing of surface profile. - Prior to coating application, the surface profile of abrasive blasted steel surfaces shall be measured for compliance to manufacturer's instructions or these specifications in accordance with NACE RP 0287; except that, measurement of less than 1.5 mil is permitted; provided that, coarse replica tape suitable for 0 to 2 mil range is used.

(d) Soluble salt testing. - Measure soluble salts or chloride specific ion by methods with a minimum lower threshold limit of 5 micrograms per square centimeter ($\mu\text{g}/\text{cm}^2$) or 5 ppm.

(aa) Test ferrous substrate surfaces by conductivity or chloride specific ion method by one of the following:

1. Elcometer 130 Salt Meter Kit manufactured by Elcometer, 1893 Rochester Industrial Drive, Rochester Hills MI 48309, telephone 248-650-0500; or equal.

2. Chlor*Test kit manufactured by Chlor*Rid International Inc., P.O. Box 908, Chandler AZ 85244, telephone 800-422-3217; or equal.

(bb) Test substrate surface after preparation to include corrosion pits for soluble salts or chloride specific ion. Perform a minimum of two tests per 1,000 square feet.

(dd) Acceptance Criteria. - Do not exceed 7 micrograms per square centimeter ($\mu\text{g}/\text{cm}^2$) or 7 ppm for immersion service, abrasive media, and water used in water jetting.

(e) Surface cleanliness. - After surface preparation, steel surfaces shall be compared to SSPC-VIS 1 visual reference.

(2) Metalwork and equipment, and existing metalwork and equipment. - Surface preparation shall be in accordance with these specifications and as indicated in the coating tabulation. Any coatings not required by and not shown in the coating tabulation shall be removed from the surfaces by suitable and effective means, unless otherwise directed. All surfaces not specifically covered shall be prepared by methods common to industry practices for the particular surface.

(a) Surface. - Weld spatter, slag, burrs, porosity, sharp edges, pits, laminations, crevices, or other irregularities shall be removed or repaired before cleaning by light etch blasting, hand, or power tools.

(b) Specific surface preparation. - Following removal or repair of surface irregularities, specific surface preparation shall be by one of the following methods, as specified for each item in the coating tabulation:

Method C. - Surface preparation shall be in accordance with SSPC-SP10/NACE 2. Wet abrasive blasting is permitted; provided that, surface cleanliness meets requirements of Section 2 of SSPC-SP10/NACE 2. Feather existing coating edge to tie-in with coating material specified in these specifications with power tool using non-woven pad..

Method G. - Surface preparation shall be in accordance with ASTM D 380.

f. Application. -

(1) General material preparation and application. - Materials shall be thoroughly mixed at the time of application, and shall be clean and free from moisture.

All Contractor-applied coatings exposed to public view shall display a uniform texture and color appearance.

Thinning of coatings to facilitate satisfactory application shall be kept to a minimum and shall not exceed the manufacturer's recommendation or the maximum VOC limit. Only manufacturer's approved thinners for the type of coating shall be used.

(2) Suspension of coating operations due to weather. - Coating application shall be suspended when impending weather conditions are unfavorable for coating application and proper cure. Conditions shall be based on the more restrictive requirement of either the manufacturer's recommendations or these specifications.

(3) Environmental temperature and humidity restrictions. - The application and curing of individual coating systems shall be restricted within the maximum and minimum specified temperatures and relative humidities applicable to that coating system. The temperature and humidity limits shall be as defined on the coating category sheets or the manufacturer's product data sheets, whichever is more restrictive. The following are temperature and humidity restrictions:

(a) For surfaces that are not thoroughly dry at application time, the substrate shall be heated to drive off any moisture present before application.

(b) The surfaces shall be a minimum of 5 degrees Fahrenheit above the dewpoint temperature at time of coating application.

(c) Surfaces shall be free of moisture, frost, and ice.

(d) Air and substrate temperatures shall be above 50 degrees Fahrenheit during application and the curing period.

(4) Control of adverse environmental conditions. - When ambient conditions are not consistent with environmental requirements, the Contractor shall control the environment by either or a combination of heaters and dehumidification equipment.

(5) Recoating times at a reference temperature. - Coated surfaces that are to receive subsequent coats shall be recoated within a time frame window and temperatures recommended by the manufacturer. Where the recoat limit has been exceeded, the Contractor shall follow surface preparation methods for the coated surface in accordance with the manufacturer's instructions.

(6) Heating of cold-applied coatings. - Heating of cold-applied coatings will be permitted to improve application properties. Heating shall be by hot-water bath or other OSHA-approved methods.

(7) Spray application. - All air supply lines of spray equipment shall be free from oil and moisture. Spray equipment shall be equipped with tips, nozzles, pressure gauges, and pressure regulators. Nozzle pressure shall be consistent to produce an atomized spray to form a continuous and uniform coating film. Spray equipment for zinc filled materials shall be equipped with mechanical agitators, except that mechanical agitators shall not be used for moisture cured zinc filled materials. During spray application, the nozzle shall be held sufficiently close to the surfaces being coated to produce a continuous wet coat, avoid excessive evaporation of the volatile constituents, loss of material into the air, and bridging over crevices and corners.

(8) Coating application. - Each coat shall be applied to produce an even film of uniform thickness which will completely cover irregularities, fill crevices, and be tightly bonded to the substrate or previous coat. Each coat shall be free from runs, pinholes, sags, laps, brush marks, voids, and other defects. Each coat shall be allowed to dry or to harden before the succeeding coat is applied. Materials shall be applied in accordance with the manufacturer's recommendations.

(a) Primer coats. - Primer coats shall cover the peaks of the surface profile by the specified dry film thickness (DFT) listed in tabulations. Primer coated shall be applied the same day surface preparation is completed. Unless otherwise specified, primer coats shall be applied as follows:

(aa) Stripe coats. - The first primer coat shall be a stripe or an edge coat applied to edges, boltheads, welds, corners, and similar surfaces by brushing to thoroughly and effectively coat these areas. The coating material may be delivered to the surface by spraying and then "scrubbed in" by brushing.

(bb) General primer coats. - After the edge coat has been applied, primer coats shall be applied by brush, roller, or spray equipment

to all surfaces, including edge coated surfaces, to achieve a smooth, uniform coating.

(b) Intermediate coats and topcoats. - Intermediate and topcoats shall be applied in accordance to the applicable tabulation number for number of coats and thickness. Application shall be within the recoat window specified by the manufacturer.

The coating color for intermediate and topcoats, not listed in the color schedule, shall be tinted by the manufacturer to differentiate between coats to aid the coating applicator in the uniformity, thickness, and complete application of the material.

g. Testing. - The hardened coating shall be tested for acceptance by the applicable standards listed below for the following coating system exposure:

(1) All coating exposures (atmospheric, burial, and partial or full immersion). - The dry film thickness (DFT) shall be measured on hardened completed coating systems, but before the recoating interval has been exceeded, on steel surfaces in accordance with SSPC-PA2; except that, the requirements of section 5.2.1, for the minimum thickness shall be 90 percent of the specified minimum thickness and section 5.2.2, for the maximum thickness shall be 150 percent of the specified maximum thickness.

No single spot measurement in any 100 square foot area shall be less than 90 percent of the minimum specified thickness and greater than 150 percent of the maximum specified thickness for DFT acceptance.

(2) Burial and partial or full immersion exposure. - Nonconductive coating applied to conductive base metals shall be tested for pinholes and holidays in accordance to NACE RP 0188. Coating systems with zinc primers or micaceous iron oxides (MIO) shall be tested at low voltage and increased to a non-damaging maximum test voltage. The use of detergent wetting solution is not permitted.

The Contractor shall consult with the manufacturer to determine maximum voltage for the applied coating for testing and prevent coating damage. The Contractor shall notify the Contracting Officer's representative 72 hours in advance of holiday testing such that the Contracting Officer's representative may witness the holiday testing.

- h. Repair of construction related defects. - Damaged areas, pinholes, holidays, laps, voids, or other defects shall be repaired within the minimum and maximum recoat window times in accordance with the coating manufacturer's recommendations and the applicable tabulation that the coating was applied. Repaired areas shall be retested. The cost of furnishing all materials and performing all work required in repairs of defective coatings shall be the responsibility of the Contractor.
- i. Cost. - The cost of furnishing, preparing, and applying materials for cleaning, coating repair, or coating operations; shall be included in the applicable prices bid in the schedule for furnishing and installing or for constructing the items to be coated.

C.7.2 COATING TABULATIONS AND CATEGORIES

- a. General. - Contractor furnished items shall be surface prepared and coated in accordance with the tabulations.
- b. Coating tabulations. - The tabulation specifies the items to be coated, the substrate surface, the coating or coating material options by an alphanumeric label, Federal or Military specification number, or "Brand" name, the number and thickness of coats to be applied, the surface preparation method, and the surface profile if different from general conditions. Within some coating options, there may be more than one coating category listed. The Contractor shall apply only one coating category per option. Individual system coats shall be compatible with the other applied coats, either primer, intermediate, or topcoat.
- c. Coating categories. - Specific coating categories referenced in the coating tabulations identify product name and manufacturer or Federal or Military specification and list the generic chemical composition, physical characteristics, and performance requirements.

Tabulation No. 01. -

The ferrous surfaces* of items listed below shall be coated in accordance with the requirements of this tabulation.

Items to be coated:

- a. Interior surfaces of water passage pipe, inlet pipe up to spiral case. Zone A
- b. Interior wetted surfaces of pressure regulating valve
 - 1. Area below control valve and needle body and steel surfaces Zones F
 - 2. Area behind discharge liner, Zone M
 - 3. Top of the main piston, underside of piston cylinder head, control valve piston and pilot bearing support
 - 4. Main piston (lower) surfaces exposed to high pressure inlet water, Zone G
- c. Interior carbon steel surfaces of the energy dissipaters. Zones I,J,K and L

Coating materials Option 1	Number and thickness of coats	Surface preparation method
Category Options: IE-1A1 IE-1C IE-1J	2 or more coats, plus stripe coats.	C
Colors and glosses: Manufacturer's standard light gray or off-white.	8-mil DFT, minimum, per coat. 16 mils DFT, minimum, for total system, plus stripe coats.	Follow the Manufacturer's specific application instructions and/or specifications for surface preparation before applying next coat.

Tabulation No. 01. -		
Coating materials Option 2	Number and thickness of coats	Surface preparation method
Category: IES-7ACE	1 or more prime coats, to produce a DFT between 2.5 to 3.5 mils per coat, plus stripe coats.	C
Colors and glosses: Manufacturer' s standard black.	1 or more intermediate coats, to produce a minimum DFT between 5 to 7 mils per coat.	Follow the Manufacturer' s specific application instructions and/or specifications for surface preparation before applying next coat.
	1 or more topcoats, to produce a minimum DFT between 5 to 7 mils per coat.	
	12.5-mil DFT, minimum, for total system, excluding stripe coats.	
Coating materials Option 3	Number and thickness of coats	Surface preparation method
Two-component, amine-isocyanate, polyurethane with inert and silicas pigments resurfacing compound:	1 or more base coats.	C
Cerami-Flex F.G. (Fluid Grade) manufactured by Thortex America Inc. 12 Iron Bridge Drive Collegeville PA 19426 (610) 831-0222	20 mil DFT, minimum, per coat.	Follow the Manufacturer' s specific application instructions and/or specifications for surface preparation before applying base and next coats.
or equal, having the following salient characteristics:	20-mils DFT, minimum, for total surface.	
Volume Solids: 100%, V.O.C. Nil		
Compressive strength: 1300 psi, ASTM D695		
Tensile Strength: 2800 psi, ASTM D1002		
Flexural Strength: 9000 psi, ASTM D790		
Rockwell Hardness: 100, ASTM D785		
Abrasion Resistance: 0.65 ml loss per 1000 cycles, ASTM D4060		
Heat distortion Temperature: 175 degrees F, ASTM D648		
Corrosion Resistance: 5000 hours ASTM B117		
Colors and glosses: Manufacturer' s standard.ASTM D4060		
*Stainless Steel or bronze items shall not be coated, unless specifically listed elsewhere in these tabulations, or otherwise specified.		

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<p>Tabulation No. 21. -</p> <p>The metal items* listed below shall be coated in accordance with the requirements of this tabulation.</p> <p>Items to be coated:</p> <p>a. Exterior surfaces of pressure regulating valve, operating links, and arms.</p>		
Coating materials Option 1	Number and thickness of coats	Surface preparation method
<p>Base coat:</p> <p>Category: IE-1A1 IE-1C IE-1J</p>	<p>2 or more coats, plus edge coats.</p> <p>8-mil DFT, minimum, per coat.</p> <p>16-mil DFT, minimum, for total system, plus edge coats.</p>	C
Coating materials Option 2	Number and thickness of coats	Surface preparation method
<p>Base coats:</p> <p>Category: IE-1A1 IE-1C IE-1J</p>	<p>2 or more coats</p> <p>7-mil DFT, minimum, per coat</p> <p>14-mil DFT, minimum, plus edge coats</p>	C
<p>Finish coat(s):</p> <p>Category: IE-1AT over IE-1A1 IE-1CT over IE-1C IE-1DT over IE-1J</p> <p>Match the compatible category "T" aliphatic polyurethane to the base coat used.</p> <p>(Colors and glosses to match existing colors.)</p>	<p>1 or more coats of compatible "T" aliphatic polyurethane</p> <p>3 to 4 mils DFT, minimum, for finish coat, per coat</p> <p>17-mil DFT, minimum, for total system, excluding edge coats</p>	Follow the Manufacturer's specific application instructions and/or specifications for surface preparation before applying next coat.

Tabulation No. 21. -		
Coating materials Option 3	Number and thickness of coats	Surface preparation method
Category: IES-7A (Colors and glosses to match existing colors.)	1 prime coat, to produce a DFT between 3 to 4 mils per coat, plus edge coats	C
	1 or more intermediate coats, to produce a minimum DFT of 3 mils per coat.	Follow the Manufacturer's specific application instructions and/or specifications for surface preparation before applying next coat.
	1 or more topcoats, to produce a DFT of 3 mils per coat	
	9-mil DFT, minimum, for total system, excluding edge coats	
* Stainless steel items shall not be coated, unless specifically listed elsewhere in these tabulations, or otherwise specified.		

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Tabulation No. 41. -

The stainless steel items listed below shall not be coated but shall have all surfaces uniformly passivated at point of manufacture. Damaged, contaminated, or depassivated surfaces of stainless steel shall be cleaned and the uniform passivation layer restored as listed by specifications Surface Preparation Method G and ASTM A 380.

Items to receive a uniform passivation layer:

- a. Stainless steel rings and discharge liner Zones C, D, H and E.

Coating materials	Number and thickness of coats	Surface preparation method
Do not coat unless specifically listed elsewhere in these tabulations.		G
Repassivation Repair Methods and Inspection Procedures of Contaminated Stainless Steel Surfaces		
Degree of surface contamination	ASTM A 380* Surface preparation method**	ASTM A 380 Surface inspection procedure**
Locally heavy surface contaminated areas: Contaminated by free iron, oxide scale, or rust related contaminants caused by field welding or cutting.	Method 5. - "Descaling", General Method 5.3 - "Mechanical Descaling" by grinding and/or Method 6.3 - "Cleaning of Welds and Weld-Joint Areas"	Method 7.2 - "Gross Inspection" Methods 7.2.5 - "Tests for Free Iron: Gross Indications"
General surface contaminated areas: Contaminated by free iron, oxide scale, or rust related contaminants.	Method 5. - "Descaling," General Method 5.2 - "Chemical Descaling" Method 5.2.2.(1) - "Chemical Descaling" by swab or spray wetting the surfaces and/or Method 5.3 - "Mechanical Descaling" by grinding	Method 7.2 - "Gross Inspection" Method 7.2.5 - "Tests for Free Iron: Gross Indications"

Tabulation No. 41. -		
General surface contaminated areas: Contaminated by grease, oil, residual chemical films, or other non-free iron related contaminants.	Method 6.2.10 - "Water Jetting" and/or Method 6.4 - "Final Cleaning, or Passivation, or Both." wiping with a clean, solvent-moistened cloth	Method 7.2 - "Gross Inspection" Method 7.2.2 - "Wipe Tests" Where films are not detectable under white light conditions, use Method 7.3 - "Precision Inspection" Method 7.3.2 - "Black Light Inspection"***
<p>* In general, the field passivation**** of contaminated surfaces shall be in accordance with ASTM A 380, Method 6.4 and Note 3. However, if the precautions found in Section 6.1 "Cleaning General" and Section 8.1 "Minimizing Iron Contaminations" are not followed, the contaminated field surfaces shall be repassivated by Table A2.1 Part II - "Cleaning-Passivation with Nitric Acid Solution" and Method 6.2.11 - "Acid Cleaning".</p> <p>** The specified surface preparation and surface inspection procedure methods listed are herein for the given "Degree of surface contamination". Other ASTM A 380 methods may also be utilized as required.</p> <p>*** Inspection shall be preformed with proper lighting, more specifically under white light blacked-out conditions.</p> <p>**** The field cleaning and passivation method used shall not damage attached parts, adjacent parts, or materials in which stainless steel parts are embedded.</p>		

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Category IE-1A1

Category IE-1A1 coating system shall be:

Amerlock 400/400 cure; as manufactured by:

Ameron
PO Box 1020
Brea CA 92622-1020
(714) 529-1951

or equal, having the following salient characteristics:

COMPOSITION:

Self-priming, two-component, polyamide epoxy coating

PHYSICAL CHARACTERISTICS:

Volume solids:	80 percent, minimum
VOC (as supplied):	1.4 pounds per gallon (168 grams per liter), maximum
Minimum curing temperature:	50 degrees F
Surface application temperature above dew point:	5 degrees F, minimum
Mixed usable pot life at 70 degrees F:	2.5 hours, minimum
Maximum applied DFT per coat:	8 mils
Curing time at 70 degrees F:	Touch - 9 hours; Through - 20 hours
Recoating time at 70 degrees F:	16 hours, minimum; 2 months, maximum; after 2 months abrade surfaces
Mixing ratio:	1 to 1, by volume
Application method:	Brush, roller, conventional, or airless spray
Time before immersion after the final coat has been applied at 70 degrees F:	7 days, minimum

COATING SYSTEM PERFORMANCE REQUIREMENTS:

Fresh/Deionized water immersion test: (ASTM D 870)	passes 3,000 hour test with aerated water held at ambient temperatures with no blisters evident on either the scribed or unscribed sides.
Salt water immersion test: (ASTM D 870, ASTM D 1141 formula A with no heavy metals)	passes 3,000 hour test with aerated water held at ambient temperatures with no blisters evident on either the scribed or unscribed sides.
Flexibility: (ASTM D 522, 180 degree bend over 1-inch mandrel)	passes
Pencil hardness: (ASTM D 3363)	2B, minimum
Pulloff Adhesion: (ASTM D 4541) (Elcometer)	greater than 500 psi
Tape adhesion: (ASTM D 3359)	equal to or better than 4A

Category IE-1C

Category IE-1C coating system shall be:

Tnemec, Series 69, Hi-Build Epoxoline II; as manufactured by:

Tnemec Company, Inc.
PO Box 411749
Kansas City MO 64141
(816) 483-3400

or equal, having the following salient characteristics:

COMPOSITION:

Self-priming, two-component, polyamidoamine epoxy

PHYSICAL CHARACTERISTICS:

Volume solids:	67 percent, minimum
VOC (as supplied):	2.29 pounds per gallon (275 grams per liter), maximum
Minimum curing temperature:	50 degrees F
Surface application temperature above dew point:	5 degrees F, minimum
Mixed usable pot life at 77 degrees F:	4 hours, minimum
Maximum applied DFT per coat:	5 mils
Curing time at 75 degrees F:	Touch - 2 hours; Handle - 6 hours
Recoating time at 75 degrees F:	8 hours, minimum; 14 days, maximum; after 14 days abrade surfaces
Mixing ratio:	1 to 1, by volume
Application method:	Brush or roller (small areas only); conventional, or airless spray
Time before immersion after the final coat has been applied at 70 degrees F:	7 days, minimum

COATING SYSTEM PERFORMANCE REQUIREMENTS:

Fresh/Deionized water immersion test: (ASTM D 870)	passes 3,000 hour test with aerated water held at ambient temperatures with no blisters evident on either the scribed or unscribed sides.
Salt water immersion test: (ASTM D 870, ASTM D 1141 formula A with no heavy metals)	passes 3,000 hour test with aerated water held at ambient temperatures with no blisters evident on either the scribed or unscribed sides.
Flexibility: (ASTM D 522, 180 degree bend over 1-inch mandrel)	passes
Pencil hardness: (ASTM D 3363)	2B, minimum
Pulloff Adhesion: (ASTM D 4541) (Elcometer)	greater than 500 psi
Tape adhesion: (ASTM D 3359)	equal to or better than 4A

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Category IE-1J

Category IE-1J coating system shall be:

Bar-Rust 235, Multi-Purpose Epoxy; as manufactured by:

ICI Devco Coatings
4000 Dupont Circle
Louisville KY 40207
(502) 897-9861

or equal, having the following salient characteristics:

COMPOSITION:

Self-priming, two-component, modified polyamide amine epoxy

PHYSICAL CHARACTERISTICS:

Volume solids:	68 percent, minimum
VOC (as supplied):	2.4 pounds per gallon (292 grams per liter), maximum
Minimum curing temperature:	40 degrees F
Surface application temperature above dew point:	5 degrees F, minimum
Mixed usable pot life at 77 degrees F and 50 percent relative humidity:	3.5 hours, minimum
Maximum applied DFT per coat:	8 mils
Recoating time at 77 degrees F and 50 percent relative humidity:	5 hours, minimum; 1 month, maximum
Mixing ratio:	4 to 1, by volume
Application method:	Brush or roller (small areas only); conventional or heavy-duty airless spray (preferred)
Time before immersion after the final coat has been applied at 70 degrees F:	7 days, minimum

COATING SYSTEM PERFORMANCE REQUIREMENTS:

Fresh/Deionized water immersion test: (ASTM D 870)	passes 3,000 hour test with aerated water held at ambient temperatures with no blisters evident on either the scribed or unscribed sides.
Salt water immersion test: (ASTM D 870, ASTM D 1141 formula A with no heavy metals)	passes 3,000 hour test with aerated water held at ambient temperatures with no blisters evident on either the scribed or unscribed sides.
Flexibility: (ASTM D 522, 180 degree bend over 1-inch mandrel)	passes
Pencil hardness: (ASTM D 3363)	3H, minimum
Pulloff Adhesion: (ASTM D 4541) (Elcometer)	greater than 500 psi
Tape adhesion: (ASTM D 3359)	equal to or better than 4A

Category IE-1DT is the weathering topcoat for this epoxy system, if one is specified.

Category IES-7ACE

Category IES-7ACE coating system shall be MC-Zinc, primer; MC-Tar, intermediate coat; MC-Tar, topcoat; as manufactured by:

Wasser High-Tech Coatings
8401 S. 228th, Building. 103
Kent WA 98032
(206) 850-2967, or equal,

or equal, having the following salient characteristics:

COMPOSITION:

Primer - Aromatic, single-component, moisture-cure, urethane - zinc pigmented

Intermediate coat and topcoat - Aromatic, single-component, moisture-cure, urethane, pigmented portion shall contain refined coal tar and micaceous iron oxide (MIO)*

Lead and chromate free

PHYSICAL CHARACTERISTICS, PRIMER:

Volume solids:	60 percent, minimum
Weight Solids:	87 percent, minimum
Weight per gallon	23.7 pounds per gallon, minimum
Pigment type:	83 percent, minimum zinc dust in dry film, yielding a minimum of 0.050 lbs/ft ² zinc by weight in dry film (at 3 mil DFT)
VOC (as supplied):	2.8 pounds per gallon (335 grams per liter), maximum
Minimum application temperature:	50 °F
Maximum applied DFT per coat:	3.5 mils
Recoating time at 50 °F and 60 to 90 percent relative humidity:	6 hours, minimum (no maximum)
Curing time at 75 °F; applied DFT of 3 mils:	Touch - 20 min: Handle - 8 hrs: Recoat - 4 hrs
Application method:	Brush, roller, conventional or airless spray

PHYSICAL CHARACTERISTICS, INTERMEDIATE COAT and TOPCOAT:

Volume solids:	60 percent, minimum
Weight Solids:	78 percent, minimum
Weight per gallon	13 pounds per gallon, minimum
Pigment type:	4 lb/gal, minimum MIO*, yielding a minimum of solids at 0.018 lbs/ft ² MIO by weight in dry film (at 6 mil DFT)
VOC (as supplied):	2.8 pounds per gallon (335 grams per liter), maximum
Minimum application temperature:	50 °F
Maximum applied DFT per coat:	7 mils
Recoating time at 50 °F and 60 to 90 percent relative humidity:	8 hours, minimum (no maximum)
Curing time at 75 °F; applied DFT of 6 mils:	Touch - 30 min: Handle - 24 hrs: Recoat - 4 hrs

Category IES-7ACE

Application method: Brush, roller, conventional, or airless spray

Time before immersion after final coat has been applied at 40 to 90 °F and greater than 8 hours, minimum

30 percent relative humidity:

* Note: All MIO products shall conform to ASTM D5532, Type 1, at 80 percent minimum lamellarity, 85 percent minimum Fe_2O_3 content, with the non-MIO crystalline content comprised of quartz, mica, feldspaths, barytine, and shall be free of sulfates, carbonates and chlorine with soluble salts below 0.04 percent, and have Certificate of Conformance from MIO source with current batch numbers and dates.

COATING SYSTEM PERFORMANCE REQUIREMENTS:

Fresh/Deionized water immersion test: (ASTM D 870)	passes 3,000 hour test with aerated water held at ambient temperatures with no blisters evident on either the scribed or unscribed sides.
Salt water immersion test: (ASTM D 870, ASTM D 1141 formula A with no heavy metals)	passes 3,000 hour test with aerated water held at ambient temperatures with no blisters evident on either the scribed or unscribed sides.
Direct impact resistance: (ASTM D 2794)	greater than 150 inch pounds
Abrasion Resistance: (ASTM D 4060, CS-17 Wheel with 1 kg load, 1000 cycles)	less than 90 mg loss
Flexibility: (ASTM D 522, 180° bend over ½-inch mandrel)	passes
Pencil hardness: (ASTM D 3363)	2B, minimum
Pulloff Adhesion: (ASTM D 4541) w/(Elcometer)	greater than 500 psi
Tape adhesion: (ASTM D 3359-93)	equal to or better than 4A

CIES7ACE.N97

SUBSECTION 8 - DRAWINGS

C.8.1. DRAWINGS, GENERAL

- a. General.--Specifications and details shown on drawings which are not applicable under these specifications shall be disregarded. In the event there are minor differences as determined by the Contracting Officer between details and dimensions shown on the drawings and those of existing features at the site, the details and dimensions of existing features at the site shall govern.
- b. Additional or revised drawings.--Except as otherwise provided in these specifications for drawings to be furnished by the Contractor, the specifications drawings will be supplemented by such additional or revised general and detail drawings as may be necessary or desirable as the work progresses; and the Contractor shall do no work without proper drawings and instructions. The additional or revised general and detail drawings furnished by the Government will show dimensions and details necessary for construction purposes more completely than are shown on the specifications drawings for all features of the work and for equipment and other metalwork not yet purchased. The Contractor will be required to perform the work in accordance with the additional general and detail drawings or revisions furnished by the Government at the applicable prices bid in the schedule for such work.
- c. Additional copies of drawings.--The Contractor will be furnished such additional copies of the specifications and drawings as may be required for carrying out the work. Full-size contact prints of the original drawings from which the attached reproductions were made will be furnished to the Contractor for construction purposes upon request. The number of prints of each drawing furnished to the Contractor will be limited to 2 contact prints and 1 reproducible.
- d. Mailing address.--All drawings and data submitted by the Contractor for which a specific mailing address is not given in these specifications shall be submitted to the Bureau of Reclamation, Regional Engineer, Lower Colorado Regional Office, P. O. Box 61470, Boulder City, Nevada 89006-1470

C.8.2. LIST OF DRAWINGS

The following drawings, located in Volume 2, are made a part of these specifications.

UNIT N1 PRV REHABILITATION
HOOVER POWERPLANT
LOWER COLORADO DAMS PROJECT, ARIZONA

- | | | |
|----|--------------|------------------------------------------------------|
| 1. | 45-301-7669 | Location Map |
| 2. | 45-301-6620 | Cross Section of Powerhouse |
| 3. | 45-301-7664 | New Apron Ring, Seats and Discharge Liner |
| 4. | 45-301-7665 | Cross Section - Pressure Relief Valve |
| 5. | 45-301-7666 | Critical Components for Replacement |
| 6. | 45-301-7666A | Critical Components for Replacement |
| 7. | 45-301-7667 | Zones of Repair and Preparation |
| 8. | 45-301-7667A | Zones of Repair and Preparation |
| 9. | 45-301-7668 | Details of new seats, Discharge Liner and Apron Ring |

Manufacturers Drawings S. Morgan Smith

- | | | |
|-----|-----------|------------------------------------------------|
| 10. | 1705-GU-1 | Body and Piston |
| 11. | 1705-GV-1 | Relief Valve Details, Valve Body |
| 12. | 1705-GW-1 | Piston, Deflector and Bearing |
| 13. | 1705-GX-1 | Body Extension & Discharge Liner |
| 14. | 1705-GY-1 | Section Relay Valve & Piston |
| 15. | 1705-GZ-1 | Relief Valve Details , Plunger, Indicator pipe |
| 16. | 1705-HA-1 | Nitrided Seats |
| 17. | 1705-HB-1 | Relief Valve Cylinder Head |
| 18. | 1705-HC-1 | Position, Indicator & Column |
| 19. | 1705-HD-1 | Position, Indicator, Details |
| 20. | 1705-HF-1 | Dashpot cylinder and head |
| 21. | 1705-HG-1 | Piston and Crosshead with Guide |
| 22. | 1705-HJ-1 | Connecting Rods, Piston Rod, Links |
| 23. | 1705-HL-1 | Adjusting Lever Details |
| 24. | 1705-HM-1 | Rocker Shaft, Bearing and Lever |
| 25. | 1705-HQ-1 | Dash Pot Guide |
| 26. | 1705-HP-1 | Control Valve |
| 27. | 1705-HR-1 | Assembly of Dashpot |
| 28. | 1705-HS-1 | Dashpot, Plan and End View |
| 29. | 1705-IA-2 | Dashpot Control for Pressure Reg. |
| 30. | 4470-K-2 | Oil Tank |

- 31. 4683-DL-1 General Dwg Elevation
- 32. 4683-EA-1 General Dwg Elevation
- 33. 4683-EF-1 Strainer and supply pipe
- 34. 4683-EK-1 General DWG Elevation
- 35. 4683-GH-1 Relief Valve Discharge Tube Liner
- 36. 4683-GI-1 General Arrangement Energy Absorber
- 37. 4683-GQ-1 Center Discharge Pipe
- 38. 4683-GS-1 Air Inlet Piping
- 39. 4683-GV-1 Discharge tube - upper section
- 40. 4683-GW-1 Sectional Elevation of Relief Valve & Discharge Tube
- 41. 4683-GX-1 Relief Valve Discharge Tube - Upper Section
- 42. 4683-HC-1 Relief Valve Control Valve - Distributing Pipes
- 43. 4780-C-1 1 1/4 inch Special Valve
- 44. 4780-D-2 2" Check Valve
- 45. 4780-1 10" angle valve

SECTION D - PACKAGING AND MARKING

THERE ARE NO CLAUSES INCLUDED IN THIS SECTION

SECTION E - INSPECTION AND ACCEPTANCE

E.1 52.252-2 Clauses Incorporated by Reference (Feb 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address:

FAR - <http://www.arnet.gov/far>

DIAR - <http://www.usbr.gov/aamsden/diar/aindex.html>

RARS - <http://www.usbr.gov/aamsden/rar.html>

All of the clauses described below are incorporated by reference into the contract.

52.246-12 Inspection of Construction (Aug 1996)

SECTION F - DELIVERIES OR PERFORMANCE

F.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address:

FAR - <http://www.arnet.gov/far>

DIAR - <http://www.usbr.gov/aamsden/diar/aindex.html>

RARS - <http://www.usbr.gov/aamsden/rar.html>

All of the clauses described below are incorporated by reference into the contract.

- 52.211-13 TIME EXTENSION (Sep 2000)
- 1452-219-80 DISTRIBUTION OF SUMMARY SUBCONTRACTING REPORTS --
BUREAU OF RECLAMATION (APR 1998)
- 52.242-14 Suspension of Work (Apr 1984)

F.2 52.211-10 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK (APR 1984)

The contractor shall be required to (a) commence work under this contract within 15 calendar days after the date the contractor receives notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than March 3, 2002 under Schedule A and March 2, 2003 under Schedule B (optional). The time stated for completion shall include final cleanup of the premises.

The contractor shall accomplish work based upon the following completion schedule:

Part (1). - The Contractor shall finish disassembling the PRV and remove all disassembled components under paragraph C.6.5. from the powerplant no later than :

PRV N1 November 5, 2001.

PRV N2 November 4, 2002 (optional Schedule B).

Part (2). - The Contractor shall finish reassembly of the PRV, complete all work under paragraphs C.6.6. through C.6.13. and complete final cleanup no later than:

PRV N1 March 3, 2002.

PRV N2 March 2, 2003 (optional Schedule B)

Part (3) - After the Government completes reassembling the turbine, the Contractor shall perform all phases of testing the PRV under paragraph C.6.14. no later than:

PRV N1 April 15, 2002

PRV N2 April 14, 2003. (optional Schedule B)

The Contractor shall be notified in writing 2 weeks prior to the day that the Contractor shall perform all testing of the PRV.

The completion dates stated in parts 1, 2, and 3 above are based on the assumption that the successful offeror will receive site availability as specified below.

The Government will issue written notification to the Contractor no less than seven (7) calendar days in advance for site availability to begin the pre-shutdown activities, pre-shutdown measurements, readings and operation of the PRV N1, and disassembly of the PRV N1 under paragraphs C.6.3. through C.6.5. The site is estimated to be available, and the performance period estimated to begin, **October 1, 2001** for PRV N1 and on **October 1, 2002** for PRV N2. The Contractor will not be permitted to perform any onsite work until after the date the site is available. If site availability is delayed beyond October 1, 2001 for PRV N1, or October 1, 2002 for PRV N2, the completion dates for parts 1, 2 and 3 (above) will be extended by the number of calendar days after October 1, 2001 for PRV N1 and October 1, 2002 for PRV N2 that the site is unavailable to the Contractor. This time extension is the sole remedy for the site availability described herein. The Contractor shall not be entitled to additional payment resulting from the delay in the availability described above.

F.3 52.211-12 LIQUIDATED DAMAGES -- CONSTRUCTION (APR 1984)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the following amounts:

Completion Schedule Part (1): \$2,000 per day

Completion Schedule Part (2): \$2,000 per day

The maximum total liability for liquidate damages for the delay shall not exceed \$50,000

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 WBR 1452.232-903 Invoice Submission Requirements--Bureau of Reclamation--Lower Colorado Region (Nov 1996)

(a) The COR has been designated authority to approve invoices for progress payments under the contract. To ensure timely processing of progress payments under the contract, the designated billing office for such payments is: Bureau of Reclamation, Attention: Regional Engineer (LC-6000), P.O. Box 61470, Boulder City NV 89006-1470.

(b) Final payment under the contract will be approved by the Contracting Officer. The final invoice will be approved pursuant to the Prompt Payment clause in the contract after all contract settlement actions are complete. To ensure timely processing, the designated billing office for the final invoice is: Bureau of Reclamation, Attention: Contracting Officer (LC-3130), P.O. Box 61470, Boulder City NV 89006-1470.

G.2 WBR 1452.242-80 Postaward Conference--Bureau of Reclamation (Jul 1993)

(a) Prior to the Contractor starting work, a postaward conference (as described in FAR Subpart 42.5), will be convened by the contracting activity or contract administration office. The Contractor's Project Manager shall attend the conference. If the contract involves subcontractors, a representative of each major subcontractor is also required to attend.

(b) The conference will be held at Hoover Dam, Boulder City, Nevada.

(c) The Contracting Officer and the Contractor will agree to the date and time of the conference after award of the contract. In event of a conflict in schedules, the Contracting Officer shall establish the date for the conference.

(d) The Contractor shall include any associated costs for attendance at the conference in its offer.

G.3 WBR 1452.242-900 Government Administration Personnel--Bureau of Reclamation--Lower Colorado Region (Jul 1998)

The contracting office representative responsible for overall administration of this contract is:

Name and Address:	Kenneth A. Miller, Contracting Officer (LC-3130)		
	Bureau of Reclamation, Lower Colorado Regional Office P.O. Box 61470, Boulder City NV 89006-1470		
Phone No.:	(702) 293-8460	Fax No.:	(702) 293-8499
E-mail:	kmiller@lc.usbr.gov		

G.4 WBR 1452.242-901 Contractor's Administration Personnel--Bureau of Reclamation-- Lower Colorado Region (Jul 1998)

The designated contractor official who will be in charge of overall administration of this contract is:

Name:			
Title:			
Address:			
City/State/Zip:			
Telephone No.:	()	FAX No.:	()
E-mail:			

G.5 WBR 1452.242-902 Contractor's Payment Personnel--Bureau of Reclamation-- Lower Colorado Region (Nov 1996)

The designated Contractor official who may be contacted for bank account and/or payment information is:

Name:			
Title:			
Address:			
City/State/Zip:			
Telephone No.:	()	FAX No.:	()
E-mail:			

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 52.211-6 Brand Name or Equal (Aug 1999) (Deviation)

(a) If an item in this solicitation is identified as “brand name or equal,” the purchase description reflects the characteristics and level of quality that will satisfy the Government's needs. The salient physical, functional, or performance characteristics that “equal” products must meet are specified in the solicitation.

(b) To be considered for award, offers of “equal” products, including “equal” products of the brand name manufacturer, must—

(1) Meet the salient physical, functional, or performance characteristic specified in this solicitation;

(2) Clearly identify the item by--

- (i) Brand name, if any; and
- (ii) Make or model number;

(3) Include descriptive literature such as illustrations, drawings, or a clear reference to previously furnished descriptive data or information available to the Contracting Officer; and

(4) Clearly describe any modifications the offeror plans to make in a product to make it conform to the solicitation requirements. Mark any descriptive material to clearly show the modifications.

(c) The Contracting Officer will evaluate “equal” products on the basis of information furnished by the offeror or identified in the offer and reasonably available to the Contracting Officer. The Contracting Officer is not responsible for locating or obtaining any information not identified in the offer.

(d) Unless the offeror clearly indicates in its offer that the product being offered is an “equal” product, the offeror shall provide the brand name product referenced in the solicitation.

(e) The information for an “equal” product required by paragraphs (b) and (c) to be submitted in the bid may be furnished after contract award for the products listed in the table below:

BRAND NAME SPECIFIED	
<p>Category 1E-1A1 Coating System - Amerlock 400/400 Cure; as Manufactured By:</p> <p>Ameron P.O. Box 1020 Brea, CA 92622-1020 (714) 529-1951</p>	<p>Category 1E-1C Coating System - Tnemec, Series 69, Hi-Build Epoxoline II; as Manufactured By:</p> <p>Tnemec Company, Inc. P. O. Box 411749 Kansas City, MO 64141 (816) 483-3400</p>
<p>Category 1E-1J Coating System - Bar-Rust 235, Multi-Purpose Epoxy; as Manufactured By:</p> <p>ICI Devoe Coatings 4000 Dupont Circle Louisville, KY 40207 (502) 897-9861</p>	<p>Category 1ES-7ACE Coating System MC-Zinc, primer; MC-Tar, intermediate coat; MC- Tar, topcoat; as Manufactured By:</p> <p>Wasser High-Tech Coatings 8401 S. 228th, Building, 103 Kent, WA 98032 (206) 850-2967</p> <p>Cerami-Flex F.G. (Fluid Grade) manufactured by: Thortex America Inc. 12 Iron Bridge Drive Collegeville PA 19426 (610)831-0222</p>

H.2 WBR 1452.223-81 Safety and Health--Bureau of Reclamation (Jul 1998)
Alternate I (Jul 1998)

(a) The Contractor shall not require any laborer or mechanic employed in the performance of this contract (including subcontracts) to work under conditions which are unsanitary, hazardous, or dangerous to the employee's health or safety.

(b) In addition to the requirements of the Accident Prevention clause of this contract, the Contractor shall comply with the Bureau of Reclamation "Reclamation Safety and Health Standards" (RSHS) manual.

(c) (1) The safety and health standards as referenced in subparagraph (b)(2) of the Accident Prevention clause may be obtained from any regional or area office of the Occupational Safety and Health Administration, U.S. Department of Labor.

(2) The Contractor may order the RSHS manual as referenced in subparagraph (b) above from: The Government Printing Office, Superintendent of Documents, North Capitol and H St. N.W., MS-SSMC - Room 566, Washington, D.C. 20401 (Stock item GPO-024-003-00178-3). The Contractor may also download the electronic version of the RSHS manual at no charge from the Lower Colorado Region' s web site at:
<http://www.lc.usbr.gov/~g3100/pdf/rshs.pdf>.

(d) The Contractor shall submit a written proposed safety program in the form and time intervals prescribed in section 2 of the RSHS manual and amendments or revisions thereto in effect on the date of the solicitation.

(e) In addition to any other provisions in the contract, the Contractor shall comply with all safety and material data submittal requirements contained in the RSHS manual and revisions thereto.

(f) The Contractor shall maintain an accurate record of, and shall report to the Contracting Officer (or authorized representative) in the manner prescribed by the Contracting Officer, all cases of death, occupational diseases, or traumatic injury to employees or the public involved, and property damage in excess of \$2,500 occurring during performance of work under this contract.

(g) The rights and remedies of the Government provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

(h) In the event there is a conflict between the requirements contained in any of the safety documents referenced herein, the more stringent requirements shall prevail.

PART II - CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I.1 52.252-2 Clauses Incorporated by Reference (Feb 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically via the Internet at this address: <http://www.arnet.gov/far>.

www.usbr.gov/aamsden - Department of the Interior (DIAR) and Reclamation Acquisition Regulation Clauses (RAR) [i.e., clauses with the prefix of 1452]

All of the clauses described below are incorporated by reference into the contract.

52.202-1	Definitions (MAR 2001) ALTERNATE I (MAR 2001)
52.203-3	Gratuities (Apr 1984)
52.203-5	Covenant Against Contingent Fees (Apr 1984)
52.203-7	Anti-Kickback Procedures (Jul 1995)
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (Jan 1997)
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (Jan 1997)
52.203-12	Limitation on Payments to Influence Certain Federal Transactions (Jun 1997)
52.204-4	Printing or Copied Double-Sided on Recycled Paper (AUG 2000)
52.209-6	Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (Jul 1995)
52.215-2	Audit and Records--Negotiation (Jun 1999)
52.215-8	Order of Precedence--Uniform Contract Format (Oct 1997)
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications (Oct 1997)
	Alternate IV (Oct 1997)
52.219-4	Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jan 1999)
52.219-8	Utilization of Small Business Concerns (Oct 2000)
52.219-9	Small Business Subcontracting Plan (Alt II)
52.219-16	LIQUIDATED DAMAGES--SUBCONTRACTING PLAN (JAN 1999)

52.219-23	NOTICE OF PRICE EVALUATION ADJUSTMENT FOR SMALL DISADVANTAGED BUSINESS CONCERNS (MAR 2001) ALTERNATE II (OCT 1998)
52.222-3	Convict Labor (Aug 1996)
52.222-4	Contract Work Hours and Safety Standards Act--Overtime Compensation (SEP 2000)
52.222-6	Davis-Bacon Act (Feb 1995)
52.222-7	Withholding of Funds (Feb 1988)
52.222-8	Payrolls and Basic Records (Feb 1988)
52.222-9	Apprentices and Trainees (Feb 1988)
52.222-10	Compliance with Copeland Act Requirements (Feb 1988)
52.222-11	Subcontracts (Labor Standards) (Feb 1988)
52.222-12	Contract Termination-Debarment (Feb 1988)
52.222-13	Compliance with Davis-Bacon and Related Act Regulations (Feb 1988)
52.222-14	Disputes Concerning Labor Standards (Feb 1988)
52.222-15	Certification of Eligibility (Feb 1988)
52.222-21	Prohibition of Segregated Facilities (Feb 1999)
52.222-26	Equal Opportunity (Feb 1999)
52.222-27	Affirmative Action Compliance Requirements for Construction (Feb 1999)
52.222-35	Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (Apr 1998) Alternate I (Apr 1984)
52.222-36	Affirmative Action for Workers with Disabilities (Jun 1998)
52.222-37	Employment Reports on Disabled Veterans and Veterans of the Vietnam Era (Jan 1999)
52.223-3	Hazardous Material Identification and Material Safety Data (Jan 1997) Alternate I (Jul 1995)
52.223-5	Pollution Prevention and Right-to-Know Information (Apr 1998)
52.223-6	Drug-Free Workplace (MAR 2001)
52.223-14	Toxic Chemical Release Reporting (Oct 2000)
52.225-13	Restrictions on Certain Foreign Purchases (Jul 2000)
52.227-1	Authorization and Consent (Jul 1995)
52.227-4	Patent Indemnity--Construction Contracts (Apr 1984)
52.228-1	Bid Guarantee (Sep 1996)
52.228-2	Additional Bond Security (Oct 1997)
52.228-5	Insurance--Work on a Government Installation (Jan 1997)
52.228-11	Pledges of Assets (Feb 1992)
52.228-12	Prospective Subcontractor Requests for Bonds (Oct 1995)
52.228-14	Irrevocable Letter of Credit (Dec 1999)
52.228-15	Performance and Payment Bonds--Construction (JUL 2000)

52.229-3	Federal, State, and Local Taxes (Jan 1991)
52.229-5	Taxes--contracts Performed in U.S. Possessions or Puerto Rico (Apr 1984)
52.232-5	Payments under Fixed-Price Construction Contracts (May 1997)
52.232-17	Interest (June 1996)
52.232-23	Assignment of Claims (Jan 1986)
52.232-27	Prompt Payment for Construction Contracts (Jun 1997)
52.232-34	Payment by Electronic funds Transfer-Other Than Central Contractor Registration (May 1999)
52.233-1	Disputes (Dec 1998) Alternate I (Dec 1991)
52.233-3	Protest After Award (Aug 1996)
52.236-2	Differing Site Conditions (Apr 1984)
52.236-3	Site Investigation and Conditions Affecting the Work (Apr 1984)
52.236-5	Material and Workmanship (Apr 1984)
52.236-6	Superintendence by the Contractor (Apr 1984)
52.236-7	PERMITS AND RESPONSIBILITIES (NOV 1991)
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements (Apr 1984)
52.236-10	Operations and Storage Areas (Apr 1984)
52.236-11	Use and Possession Prior to Completion (Apr 1984)
52.236-12	Cleaning Up (Apr 1984)
52.236-13	Accident Prevention (Nov 1991)
52.236-15	Schedules for Construction Contracts (Apr 1984)
52.236-14	Availability and Use of Utility Services (Apr 1984)
52.236-17	Layout of Work (Apr 1984)
52.236-21	Specifications and Drawings for Construction (Feb 1997) Alternate I (Apr 1984)
52.236-26	Preconstruction Conference (Feb 1995)
52.242-13	Bankruptcy (Jul 1995)
52.243-4	Changes (Aug 1987)
52.244-2	Subcontracts (Aug 1998)
52.245-1	Property Records (Apr 1984)
52.245-2	Government Property (Fixed-Price Contracts) (Dec 1989)
52.246-21	Warranty of Construction (Mar 1994)
52.248-3	Value Engineering--Construction (Feb 2000)
52.249-2	Termination for Convenience of the Government (Fixed-Price) (Sep 1996) Alternate I (Sep 1996)
52.249-10	Default (Fixed-Price Construction) (Apr 1984)
52.253-1	Computer Generated Forms (Jan 1991)

- 1452.201-80 Authorities and Limitations--Bureau of Reclamation (Jul 1993)
- 1452.209-82 Prohibition on Release of Information--Bureau of Reclamation (Jul 1997)
- 1452.223-80 Asbestos-Free Warranty (Oct 1992)
- 1452.236-84 PRESERVATION OF CULTURAL RESOURCES – BUREAU OF RECLAMATION (FEB 2000)
- 1452.243-80 Modification Proposals (Feb 2000) Alternate III (Jul 1998)

I.2 1452.203-70 Restriction on Endorsements--Department of the Interior (Jul 1996)

The Contractor shall not refer to contracts awarded by the Department of the Interior in commercial advertising, as defined in FAR 31.205-1, in a manner which states or implies that the product or service provided is approved or endorsed by the Government, or is considered by the Government to be superior to other products or services. This restriction is intended to avoid the appearance of preference by the Government toward any product or service. The Contractor may request the Contracting Officer to make a determination as to the propriety of promotional material.

I.3 1452.204-70 Release of Claims--Department of the Interior (Jul 1996)

After completion of work and prior to final payment, the Contractor shall furnish the Contracting Officer with a release of claims against the United States relating to this contract. The Release of Claims form (DI-137) shall be used for this purpose. The form provides for exception of specified claims from operation of the release.

I.4 WBR 1452.214-910 Order of Precedence - Drawings--Bureau of Reclamation-- Lower Colorado Region (Nov 1996)

(a) For the purposes of Order of Precedence, any drawings included with this solicitation shall be considered to supplement the specifications regardless of where they may appear. Any inconsistency between the drawings and the specifications shall be resolved by giving precedence to the specifications.

(b) Anything shown on the drawings and not mentioned in the specifications or called for in the specifications and not shown on the drawings, shall be furnished the same as if it were called for or shown in both.

I.5 WBR 1452.223-81 Safety and Health--Bureau of Reclamation (Jul 1998)
Alternate I (Jul 1998)

(a) The Contractor shall not require any laborer or mechanic employed in the performance of this contract (including subcontracts) to work under conditions which are unsanitary, hazardous, or dangerous to the employee's health or safety.

(b) In addition to the requirements of the Accident Prevention clause of this contract, the Contractor shall comply with the Bureau of Reclamation "Reclamation Safety and Health Standards" (RSHS) manual.

(c) (1) The Contractor may obtain the safety and health standards as referenced in subparagraph (b)(2) of the Accident Prevention clause from any regional or area office of the Occupational Safety and Health Administration, U.S. Department of Labor.

(2) The Contractor may order the RSHS manual as referenced in subparagraph (b) above from: The Government Printing Office, Superintendent of Documents, North Capitol and H St. N.W., MS-SSMC - Room 566, Washington, D.C. 20401 (Stock item GPO-024-003-00178-3). The Contractor may also download the electronic version of the RSHS manual at no charge from the Lower Colorado Region's web site at: <http://www.lc.usbr.gov/~g3100/pdf/rshs.pdf>.

(d) The Contractor shall submit a written proposed safety program in the form and time intervals prescribed in section 2 of the RSHS manual and amendments or revisions thereto in effect on the date of the solicitation.

(e) In addition to any other provisions in the contract, the Contractor shall comply with all safety and material data submittal requirements contained in the RSHS manual and revisions thereto.

(f) The Contractor shall maintain an accurate record of, and shall report to the Contracting Officer (or authorized representative) in the manner prescribed by the Contracting Officer, all cases of death, occupational diseases, or traumatic injury to employees or the public involved, and property damage in excess of \$2,500 occurring during performance of work under this contract.

(g) The rights and remedies of the Government provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

(h) In the event there is a conflict between the requirements contained in any of the safety documents referenced herein, the more stringent requirement shall prevail.

I.6 WBR 1452.223-82 Protecting Federal Employees and the Public from Exposure to Tobacco Smoke in the Federal Workplace--Bureau of Reclamation (Oct 1998)

(a) In performing work under this contract, the contractor shall comply with the requirements of Executive Order 13058, dated August 9, 1997, which prohibits the smoking of tobacco products in all interior space owned, rented, or leased by the executive branch of the Federal Government, and in any outdoor areas under executive branch control in front of air intake ducts.

(b) This restriction does not apply in designated smoking areas that are enclosed and exhausted directly to the outside and away from air intake ducts, and are maintained under negative pressure (with respect to surrounding spaces) sufficient to contain tobacco smoke within the designated area.

(c) Smoking may also be restricted at doorways and in courtyards under executive branch control in order to protect workers and visitors from environmental tobacco smoke.

I.7 WBR 1452.223-900 Safety Data Submittal Requirements--Bureau of Reclamation--Lower Colorado Region (Nov 1996)

(a) Within 20 calendar days from the date it receives notice of award, the Contractor shall submit the following safety data to the Contracting Officer:

(1) The Contractor's current overall Experience Modification Rate (EMR) for Workers' Compensation Insurance applicable to the type of work to be performed under the contract (e.g., tunneling, concrete dams, canals) and to the State in which the work is to be performed. In any instance where the State establishes mandatory Workers' Compensation Insurance rates that are applicable to work to be performed under the contract within that State, those rates shall be submitted in lieu of the Contractor's current overall EMR;

(2) A copy of each Log and Summary of Occupational Injuries and Illnesses (Department of Labor Form OSHA-200), or its equivalent, completed by the Contractor during the 3 calendar years immediately preceding the calendar year in which it receives notice of award; and

(3) The Contractor's death and lost workday severity incidence rate for each of the 3 calendar years immediately preceding the calendar year in which it receives notice of award.

(b) The Contractor shall report any change in its overall EMR for Workers' Compensation Insurance (or to the mandatory State Workers' Compensation Insurance rates, where applicable) to the Contracting Officer within 15 calendar days from the date it receives notice of such change from its insurance carrier or the State Workers' Compensation Fund.

(c) The Contractor shall complete a Department of Labor Form OSHA-200, or its equivalent, for the calendar year in which it receives notice of award and each calendar year thereafter, and submit it to the Contracting Officer by February 15 of the following calendar year.

(d) The Contractor shall calculate its death and lost workday severity incidence rate for the calendar year in which it receives notice of award and each calendar year thereafter, and submit it to the Contracting Officer by February 15 of the following calendar year.

I.8 52.225-9 Buy American Act--Balance of Payments Program--Construction Materials (Feb 2000)

(a) Definitions. As used in this clause--

"Component" means any article, material, or supply incorporated directly into construction materials.

"Construction material" means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

"Cost of components" means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the end product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

“Domestic construction material” means--

(1) An unmanufactured construction material mined or produced in the United States; or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

“Foreign construction material” means a construction material other than a domestic construction material.

“United States” means the 50 States and the District of Columbia, U.S. territories and possessions, Puerto Rico, the Northern Mariana Islands, and any other place subject to U.S. jurisdiction, but does not include leased bases.

(b) Domestic preference. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) and the Balance of Payments Program by providing a preference for domestic construction material. The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the construction material or components listed by the Government as follows: see paragraph I.7, clause 1452.225-70, Use of Foreign Construction Materials.

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that--

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent. For determination of unreasonable cost under

the Balance of Payments Program, the Contracting Officer will use a factor of 50 percent;

(ii) The application of the restriction of the Buy American Act or Balance of Payments Program to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act or Balance of Payments Program.

(1) (i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act or Balance of Payments Program applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act or Balance of Payments Program applies, use of foreign construction material is noncompliant with the Buy American Act or Balance of Payments Program.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison				
Construction material description		Unit of measure	Quantity	Price (dollars)*
Item 1	Foreign construction material			
	Domestic construction material			
Item 2	Foreign construction material			
	Domestic construction material			
* Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).				

[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]

[Include other applicable supporting information.]

I.9 1452.225-70 Use of Foreign Construction Materials--Department of the Interior (Jul 1996)

(a) The Government has determined that the Buy American Act is not applicable to the following construction materials because they are not mined, produced, or manufactured in the U.S. in sufficient quantities of a satisfactory quality:

Acetylene, black	Hog bristles for brushes
Agar, bulk	Hyoscine, bulk
Anise	Ipecac, root
Antimony, as metal or oxide	Iodine, crude
Asbestos, amosite, chrysotile, and crocidolite	Kaurigum
Bananas	Lac
Bauxite	Leather, sheepskin, hair type
Beef, corned, canned	Lavender oil
Beef extract	Manganese
Bephenium hydroxynapthoate	Menthol, natural bulk
Bismuth	Mica
Books, trade, text, technical, or scientific; newspapers; pamphlets; magazines; periodicals; printed briefs and films; not printed in the United States and for which domestic editions are not available	Microprocessor chips (brought onto a Government construction site as separate units for incorporation into building systems during construction or repair and alteration of real property)
Brazil nuts, unroasted	Nickel, primary, in ingots, pigs, shots, cathodes, or similar forms; nickel oxide and nickel salts
Cadmium, ores and flue dust	Nitroguanidine (also known as picrite)
Calcium cyanamide	Nux vomica, crude
Capers	Oiticica oil
Cashew nuts	Olive oil
Castor beans and castor oil	Olives (green), pitted or unpitted, or stuffed, in bulk
Chalk, English	Opium, crude
Chestnuts	Oranges, mandarin, canned
Chicle	Petroleum, crude oil, unfinished oils, and finished products
Chrome ore or chromite	Pine needle oil
Cinchona bark	Platinum and related group metals, refined, as sponge, powder, ingots, or cast bars
Cobalt, in cathodes, rondelles, or other primary ore and metal forms	Pyrethrum flowers
Cocoa beans	Quartz crystals
Coconut and coconut meat, unsweetened, in shredded, desiccated, or similarly prepared form	Quebracho
Coffee, raw or green bean	Quinidine
Colchicine alkaloid, raw	Quinine
Copra	Rabbit fur felt
Cork, wood or bark and waste	Radium salts, source and special nuclear materials
Cover glass, microscope slide	Rosettes
Crane rail (85-pound per foot)	Rubber, crude and latex
Cryolite, natural	Rutile
Dammar gum	Santonin, crude
Diamonds, industrial, stones and abrasives	Secretin
Emetine, bulk	Shellac
Ergot, crude	Silk, raw and unmanufactured
Erythrityl tetranitrate	Spare and replacement parts for equipment of foreign manufacture, and for which domestic parts are not available
Fair linen, altar	Spices and herbs, in bulk
Fibers of the following types: abaca, abace, agave, coir, flax, jute, jute burlaps, palmyra, and sisal	Sugars, raw
Goat and kidskins	Swords and scabbards
Graphite, natural, crystalline, crucible grade	Talc, block, steatite
Hand file sets (Swiss pattern)	Tantalum
Handsewing needles	Tapioca flour and cassava
Hemp yarn	Tartar, crude; tartaric acid and cream of tartar in bulk

Tea in bulk
 Thread, metallic (gold)
 Thyme oil
 Tin in bars, blocks, and pigs
 Triprolidine hydrochloride
 Tungsten
 Vanilla beans

Venom, cobra
 Wax, carnauba
 Wire glass
 Woods; logs, veneer, and lumber of the following species:
 Alaskan yellow cedar, angelique, balsa, ekki, greenheart,
 lignum vitae, mahogany, and teak Yarn, 50 Denier rayon

(b) Offers based on the use of foreign construction materials other than those listed in (a) above may be acceptable if the Government determines that U.S. construction material is not available, would be impracticable or constitute an unreasonable price. Please contact the Contracting Officer with questions or comments concerning non-availability or impracticability of U.S. material.

(c) (1) Offers based upon use of foreign construction material for cost savings will be considered reasonable if the cost of each foreign construction material, plus 6 percent, is less than the cost of comparable U.S. construction material. The Contracting Officer shall compute the cost of each foreign construction material to include all delivery costs to the construction site, and any applicable duty (whether or not a duty-free entry certificate is issued). This evaluation shall be made for each foreign construction material included in the offer but not listed in subparagraph (a) above in this clause.

(2) Any contractor cost savings from post award approval to substitute foreign construction material for U.S. construction material shall be passed on to the Government.

(d) (1) This offer is based on the use of foreign construction material not listed in (a) above. For each foreign item proposed the offeror shall furnish the following information for the foreign material offered: item description, supplier, unit of measure, quantity, unit price, duty (even if a duty free certificate is issued), delivery costs, and total price and shall also identify information on a U.S. item comparable to the foreign item including: supplier, unit of measure, quantity, unit price, delivery costs and total price.

(2) If the Government rejects the use of foreign construction material listed under paragraph (d)(1) above, the Government will evaluate the Contractor's offer using the offeror's stated price for the comparable U.S. construction material, and the offeror shall be required to furnish such domestic construction material at the Contractor's originally offered price. In preaward situations, an offer which does not state a price for a comparable U.S. construction material will be rejected by the Government. In postaward situations an offer proposing foreign material which does not state the price for the comparable U.S. construction material will be rejected by the Government. The Contractor shall use comparable U.S. material for the project and any additional cost for the use of this U.S. material shall be absorbed by the Contractor.

I.10 1452.228-70 Liability Insurance--Department of the Interior (Jul 1996)

(a) The Contractor shall procure and maintain during the term of this contract and any extension thereof liability insurance in form satisfactory to the Contracting Officer by an insurance company which is acceptable to the Contracting Officer. The named insured parties under the policy shall be the Contractor and the United States of America. The amounts of the insurance shall be not less than as follows:

WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY

\$100,000

GENERAL LIABILITY

\$500,000 per occurrence

AUTOMOBILE LIABILITY

\$200,000 each person

\$500,000 each occurrence

\$ 20,000 property damage

(b) Each policy shall have a certificate evidencing the insurance coverage. The insurance company shall provide an endorsement to notify the Contracting Officer 30 days prior to the effective date of cancellation or termination of the policy or certificate; or modification of the policy or certificate which may adversely affect the interest of the Government in such insurance. The certificate shall identify the contract number, the name and address of the Contracting Officer, as well as the insured, the policy number and a brief description of contract services to be performed. The Contractor shall furnish the Contracting Officer with a copy of an acceptable insurance certificate prior to beginning the work.

I.11 WBR 1452.228-84 Certification of Representatives for Corporate Sureties--
Bureau of Reclamation (Sep 1996)

(a) Each surety company bond, that purports to have been executed by an agent or attorney-in-fact for the corporate surety, shall --

(1) be accompanied by a power of attorney to the signatory agent or attorney-in-fact; and

(2) the power of attorney or attorney-in-fact shall have been executed by the corporate surety upon a date prior to the date of the execution of the bond; or

(3) be accompanied by a certification of the sureties to the effect that the power of attorney was in full force and effect upon the date of the bond.

I.12 WBR 1452.231-81 Equipment Ownership and Operating Expense--Bureau of Reclamation (Jul 1998)

(a) Definitions. "Acquisition cost," as used in this clause means, the Contractor's original purchase price (including sales tax less salvage value) of an item of equipment including any and all accessories and expendable components required for utilization the item of equipment. For used equipment which is reconditioned and recapitalized, "acquisition cost" shall mean the adjusted amount resulting from the recapitalized value of the equipment as determined from the Contractor's accounting records.

"Equipment," as used in this clause, means equipment in sound workable condition at the construction work site, either owned or controlled by the Contractor or its subcontractors at any tier, or obtained from a commercial rental source, and furnished for use under this contract.

"Ownership cost," as used in this clause, means allowances for construction equipment depreciation and cost of facilities capital.

"Operating cost," as used in this clause, means the cost of operating equipment such as operating crew labor, servicing labor and equipment, labor and parts for all repairs and maintenance, fuel, oil, grease, supplies, tire wear and repair.

(b) Policy. (1) Equitable adjustments made in the price of this contract pursuant to the Changes, Differing Site Condition, Suspension of Work, or other clause of the contract, may include allowable ownership and operating costs for equipment. In accordance with FAR 31.105(d), allowable ownership and operating costs for each piece of equipment, or groups of similar serial or series equipment, shall be determined using actual cost data when such data are available from the Contractor's accounting records. When actual costs cannot be so determined or when actual cost data for a specific element of operating cost do not contain costs for individual pieces or types of equipment, the procedures in paragraph (d) of this clause shall be used to determine allowable costs (provided, in the case of operating costs, that the costs are reconciled to the Contractor's total cost for that operating element). For fully depreciated

equipment, the procedures in paragraph (e) of this clause shall be used to determine allowable costs.

(c) Required data. In any request made for an equitable adjustment, the Contractor shall furnish to the Contracting Officer --

(1) A complete description of each item of equipment (including all accessory equipment attached thereto) to be used in connection with the work to be performed listing the date of manufacture, date of acquisition, make, model, size, capacity, mounting, and type of power;

(2) Evidence of the acquisition cost of new or used equipment to be used including all available current and historical supporting cost data. If evidence of acquisition cost is not provided by the Contractor or if the data provided are unacceptable to the Contracting Officer, the Contracting Officer may determine the acquisition cost by other appropriate means.

(d) Use of the predetermined rate schedule.

(1) When the Contracting Officer determines that allowable ownership and operating costs cannot be determined from the Contractor's accounting records, the U.S. Army Corps of Engineers pamphlet entitled "Construction Equipment Ownership and Operating Expense Schedule" (Schedule) for the State in which the construction site is located shall be used to calculate ownership and operating rates. Copies of the Schedules can be obtained, free of charge, from the U.S. Army Corps of Engineers, Publications Depot, 2803 52nd Avenue, Hyattsville, MD 20781-1102.

(2) For the purpose of determination of the hourly rates to be applied under this contract, working conditions shall be considered average, unless otherwise determined by the Contracting Officer.

(3) Rates for equipment not listed in the Schedule shall be calculated using the formulas in the Schedule. Alternatively, the Contracting Officer may determine to use rates in the Schedule for equipment comparable to the unlisted equipment, including horsepower and auxiliary features.

(e) Fully depreciated equipment. No depreciation or rental cost shall be allowed on equipment fully depreciated by the Contractor or by any division, subsidiary, parent company, or affiliate under common control. However, a reasonable rate for using fully depreciated equipment may be allowed by the Contracting Officer. Unless otherwise determined by the Contracting Officer, such hourly rate shall not exceed a value

computed by multiplying the depreciation rate for the equipment (as shown in the Schedule table entitled "Construction Equipment Ownership and Operating Expense") by the economic index for the year of equipment manufacture (as shown in the Schedule table entitled "Economic Indexes for Construction Equipment"), divided by the economic index correspondingly with the year the Schedule is published. The year used for the basis of the rates in the Schedule is indicated in the table entitled "Equipment Age Adjustment Factors for Ownership Costs." Idle or standby time will not be paid for fully depreciated equipment.

(f) Idle or standby time. Equipment ownership costs for idle or standby time of equipment not fully depreciated shall be determined as follows:

(1) The allowable rate shall be made at 50 percent of the hourly rate for ownership costs if actual cost data are used. The maximum hours per week allowed shall not exceed 40 hours or the amount of hours regularly worked by the Contractor, whichever is less. No allowance shall be made for Saturdays, Sundays, or holidays, when work is not actually performed.

(2) If actual cost data cannot be determined, the rate shall be computed in accordance with the Schedule.

(3) No costs shall be allowed for time when the equipment would have been otherwise idle or was not in good operating condition.

(4) Periods of time less than 2 hours on which equipment is down for normal and regular servicing and for minor field repair or field maintenance shall be considered by the Contractor to be operating time rather than idle or standby time and such periods shall not be deducted from use or operating time.

(5) No costs are allowable for fully depreciated equipment.

(g) Rental. Allowable costs for renting or leasing of equipment shall be determined in accordance with FAR 31.105(d)(2)(ii) and 31.205-36.

I.13 52.232-34 Payment by Electronic Funds Transfer—Other Than Central Contractor Registration (May 1999)

(a) *Method of payment.* (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT) except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either—

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend payment due dates until such time as the Government makes payment by EFT (but see paragraph (d) of this clause).

(b) *Mandatory submission of Contractor's EFT information.* (1) The Contractor is required to provide the Government with the information required to make payment by EFT (see paragraph (j) of this clause). The Contractor shall provide this information directly to the office designated in this contract to receive that information (hereafter: "designated office") prior to submitting the first payment invoice. If not otherwise specified in this contract, the payment office is the designated office for receipt of the Contractor's EFT information. If more than one designated office is named for the contract, the Contractor shall provide a separate notice to each office. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the designated office(s).

(2) If the Contractor provides EFT information applicable to multiple contracts, the Contractor shall specifically state the applicability of this EFT information in terms acceptable to the designated office. However, EFT information supplied to a designated office shall be applicable only to contracts that identify that designated office as the office to receive EFT information for that contract.

(c) *Mechanisms for EFT payment.* The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) *Suspension of payment.* (1) The Government is not required to make any payment under this contract until after receipt, by the designated office, of the correct EFT payment information from the Contractor. Until receipt of the correct EFT information, any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(2) If the EFT information changes after submission of correct EFT information, the Government shall begin using the changed EFT information no later than 30 days after its receipt by the designated office to the extent payment is made by EFT. However, the Contractor may request that no further payments be made until the updated EFT information is implemented by the payment office. If such suspension would result in a late payment under the prompt payment terms of this contract, the Contractor's request for suspension shall extend the due date for payment by the number of days of the suspension.

(e) *Liability for uncompleted or erroneous transfers.* (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for—

- (i) Making a correct payment;
- (ii) Paying any prompt payment penalty due; and
- (iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and—

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment and the provisions of paragraph (d) shall apply.

(f) *EFT and prompt payment.* A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(g) *EFT and assignment of claims.* If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall provide the EFT information required by paragraph (j) of this clause to the designated office, and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the

Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(h) *Liability for change of EFT information by financial agent.* The Government is not liable for errors resulting from changes to EFT information provided by the Contractor's financial agent.

(i) *Payment information.* The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address in the contract.

(j) *EFT information.* The Contractor shall provide the following information to the designated office. The Contractor may supply this data for this or multiple contracts (see paragraph (b) of this clause). The Contractor shall designate a single financial agent per contract capable of receiving and processing the EFT information using the EFT methods described in paragraph (c) of this clause.

(1) The contract number (or other procurement identification number).

(2) The Contractor's name and remittance address, as stated in the contract(s).

(3) The signature (manual or electronic, as appropriate), title, and telephone number of the Contractor official authorized to provide this information.

(4) The name, address, and 9-digit Routing Transit Number of the Contractor's financial agent.

(5) The Contractor's account number and the type of account (checking, saving, or lockbox).

(6) If applicable, the Fedwire Transfer System telegraphic abbreviation of the Contractor's financial agent.

(7) If applicable, the Contractor shall also provide the name, address, telegraphic abbreviation, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment if the Contractor's financial agent is not directly on-line to the Fedwire Transfer System; and, therefore, not the receiver of the wire transfer payment.

I.14 52.236-8 Other Contracts (Apr 1984) (Deviation)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

I.15 52.244-6 Subcontracts for commercial Items and Commercial Components (Oct 1998)

(a) Definition

Commercial item, as used in this clause, has the meaning contained in the clause at 52.202-1, definitions.

Subcontract, as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c) Notwithstanding any other clause of this contract, the Contractor is not required to include any FAR provision or clause, other than those listed below to the extent they are applicable and as may be required to establish the reasonableness of prices under Part 15, in a subcontract at any tier for commercial items or commercial components:

(1) 52.222-26, Equal Opportunity (E.O. 11246);

(2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212(a));

(3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793);
and

(4) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (46 U.S.C. 1241) (flow down not required for subcontracts awarded beginning May 1, 1996).

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

I.16 52.252-6 Authorized Deviations in Clauses (Apr 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation of any Department of Interior Acquisition Regulation (48 CFR Chapter 14) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

I.17 WBR 1452.217-901 OPTION FOR ADDITIONAL SCHEDULE --BUREAU OF RECLAMATION--LOWER COLORADO REGION (MAR 2001)

(a) The Government may require the performance of work required under the optional Schedule B identified in Section B at the prices stated in the Schedule.

(b) The Contracting Officer may exercise Optional Schedule B by written notice to the Contractor no later than 14 calendar days prior to the beginning of the performance period of Optional Schedule B. The performance period is estimated to begin October 1, 2002 for PRV N2.

I.18 WBR 1452.232-80 Limitation of Funds (Fixed-Price Contract)--Bureau of Reclamation (May 2000)

(a) Pursuant to Section 12 of the Reclamation Project Act of 1939 (43 U.S.C. 388) incremental funding for this contract will be made available in accordance with this clause. This statute permits the Secretary of the Interior to enter into contracts which will cover such periods as the Secretary may consider necessary but in which liability of the United States shall be contingent upon appropriations being made therefor. For

purposes of this clause, the term “appropriations” includes the Bureau of Reclamation’s subsequent allocation of funds for this contract.

(b) Incremental funding in the amount of \$10,000 is presently available for payment and allotted under this contract for bonding cost and a portion of contract line item number (CLIN) 1. This present funding allotment is contemplated to cover the work required in fiscal year 2001 (ending September 30, 2001). In addition, funding in the amount of the remainder of Schedule A will be available for payment under Schedule A in fiscal year 2002 (beginning October 1, 2001 and ending September 30, 2002). In addition funding in the amount of Schedule B will be available for payment in fiscal year 2003. A schedule for anticipated future funding allotments is as follows. This information is for planning purposes only and may not be fully representative of the funds actually allotted under this contract

Fiscal Year	Funding Amount
Schedule A, at contract award, Fiscal Year 2001	\$10,000
Schedule A, Fiscal Year 2002	remainder of Schedule A
Option Schedule B, Fiscal Year 2003	all of Schedule B

(c) For work identified in paragraph (b) of this clause, the Contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of specified work for the Government's convenience, approximates the total amount currently allotted to the contract. The Contractor shall not be obligated to continue performance of this work beyond that point. The Government shall not be obligated in any event to reimburse the Contractor in excess of the amount allotted to the contract for this work notwithstanding any contrary provisions of the Termination for Convenience of the Government clause of this contract.

(d) Notwithstanding the date specified in paragraph (b) of this clause, the Contractor shall notify the Contracting Officer in writing at least sixty days prior to the date when, in the Contractor's best judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate 75 percent of the total amount then allotted to the contract for performance of work identified in paragraph (b) of this clause. The notification shall state (1) the estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance of the work up to the next scheduled date for allotment of funds identified in paragraph (b) of this

clause, or to a mutually agreed upon substitute date. The notification shall also advise the Contracting Officer of the estimated amount of additional funds that will be required for the timely performance of work funded pursuant to this clause, for a subsequent period as may be specified in the allotment schedule in paragraph (b) of this clause, or otherwise agreed to by the parties. If after such notification additional funds are not allotted by the date identified in the Contractor's notification, or by an agreed substitute date, the Contracting Officer shall terminate any work for which additional funds have not been allotted, pursuant to the Termination for Convenience of the Government clause of this contract.

(e) When additional funds are allotted for continued performance of the work identified in paragraph (b) of this clause, the parties will agree as to the period of contract performance which will be covered by the funds. The provisions of paragraph (c) through (e) of this clause will apply in like manner to the additional allotted funds and agreed substitute date, and the contract will be modified accordingly through revision of paragraph (b) of this clause. The Contracting Officer is the only person authorized to provide notice, communication, or other form of representation to increase or decrease the amount of funds allotted by the Government to this contract.

(f) If, solely by reason of failure of the Government to allot additional funds in amounts sufficient for timely performance of the work identified in paragraph (b) of this clause, the Contractor incurs additional costs or is delayed in the performance of the work under this contract and if additional funds are allotted, an equitable adjustment will be made in the price or prices (including appropriate target, billing, and ceiling prices where applicable) of work, or in the time of delivery, or both. Failure to agree to any such equitable adjustment hereunder shall be a dispute concerning a question of fact within the meaning of the Disputes clause of this contract.

(g) The Government may at any time prior to termination allot additional funds for the performance of the work identified in paragraph (b) of this clause.

(h) The termination provisions of this clause do not limit the rights of the Government under the Default clause of this contract. The provisions of this clause are limited to the work and allotment of funds as set forth in paragraph (b) of this clause. This clause is inapplicable once the contract is fully funded except with regard to the rights or obligations of the parties concerning equitable adjustments negotiated under paragraphs (e) or (f) of this clause.

(i) Change orders shall not be considered authorization to exceed the amount allotted by the Government as specified in paragraph (b) of this clause unless the amount is increased by inclusion of a statement contained in the change order.

(j) Nothing in this clause affects the right of the Government to terminate this contract pursuant to the Termination for Convenience of the Government clause of this contract.

I.19 WBR 1452.232-81 PAYMENT FOR MOBILIZATION AND PREPARATORY WORK --
BUREAU OF RECLAMATION (MAY 2000)

(a) General. Payment for the Mobilization and Preparatory Work line item of the schedule will be made as reflected herein. To the extent that this line item exceeds the percentage of total contract pricing as estimated by the Contracting Officer in WBR 1452.236-85, Instruction for Mobilization and Preparatory Work Schedule Line Item, payment will be made as reflected in Section (d)(5) below. Reclamation will make payment to the Contractor in accordance with this clause for operations including, but not limited to, those necessary for --

(1) Movement of personnel, equipment, supplies, and incidentals to the project site;

(2) The establishment of offices, buildings, plants and other facilities, at the site (excludes temporary buildings (e.g. storage sheds, shops, offices) and utilities listed in the Operations and Storage Areas clause of this contract);

(3) Payment of premiums for project bonds and insurance; and

(4) Other work and operations which must be performed or costs incurred incident to the initiation of meaningful work at the site and for which the contract does not otherwise provide for payment.

(b) Facilities and equipment covered by mobilization work.

(1) All facilities, plant, and equipment which are established at, or brought to, the site shall be deemed to be subject to the provisions of this paragraph unless the Contracting Officer specifically provides other written authorization for a particular item or items.

(2) The Contractor shall be solely responsible for the adequacy, efficiency, use, protection, maintenance, repair, and preservation of all facilities, plant, and equipment on site.

(3) The facilities, plant, and equipment covered by this paragraph shall not be dismantled or removed from the site prior to completion of the work under the contract without the written authorization of the Contracting Officer.

(c) Termination for default. Should the Contractor be terminated for default as provided by the Default clause of this contract --

(1) All facilities, plant, and equipment on the site shall be subject to the Government's right to take possession of and utilize such items for the purpose of completing the work;

(2) The Contractor shall provide evidence of encumbrances, liens, or other security interests, to the Contracting Officer; and

(3) Any encumbrance, lien, or other security interest on such facilities, plant, or equipment shall be subordinated to the Government's rights under the Default clause of this contract to utilize all facilities, plant, and equipment to complete the work under the contract.

(d) Payment. Payment for mobilization and preparatory work under paragraph (a) of this clause shall be made at the contractor lump-sum price for this item as contained in the Schedule. Progress payments for mobilization and preparatory work shall be made as follows:

(1) In accordance with paragraph (g) of the Payments under Fixed Price Construction Contracts clause of this contract and upon submission of a proper invoice, the Government will reimburse the Contractor for the total amount of premiums paid for performance and payment bonds as required by the Performance and Payment Bond Requirements clause of this contract and for any insurance which is specified as payable by the Government under this contract.

(2) Except as provided in (d)(1) above, progress payments for mobilization and preparatory work shall not be considered a separate division of work for the purposes of progress payments and shall be subject to retainage before payment of the total amount for this contract line item.

(3) When progress payments totaling 5 percent of the total original contract amount have been made by the Government for all other work accomplished under the contract, the Government shall pay the Contractor 50 percent of the mobilization and preparatory work contract line item amount or 2.5 percent of the total original contract amount (whichever is the lower) exclusive of any payment already made to the Contractor for performance and payment bond premiums and specified insurance under subparagraph (d)(1) of this clause.

(4) When progress payments totaling 10 percent of the total original contract amount have been made by the Government for all other work accomplished under the contract, the balance of the amount for the mobilization and preparatory work contract line item or 2.5 percent of the total original contract amount (whichever is the lower) shall be paid to the contractor.

(5) If the contract amount for mobilization and preparatory work exceeds the total of the payments allowed under (3) and (4) above, the balance shall be paid when the contract work is substantially complete as determined by the Contracting Officer.

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PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

SECTION J - LIST OF ATTACHMENTS

- J.1 WBR 1452.215-904 Applicability of Documents--Bureau of Reclamation--Lower Colorado Region (Nov 1996)

The documents, exhibits, and other attachments which are identified in this Section J, apply to and are a part of this contract. In the event that any document is missing in whole or in part from this document when received, the Contracting Officer shall be notified immediately.

- J.2 WBR 1452.215-905 List of Contract Documents--Bureau of Reclamation--Lower Colorado Region (Nov 1996)

Attachment No.	Title	No. of Pages
1	Appendix A	3
2	Department of Labor Wage Rate	7 25
3	Release of Claims form (DI-137)	1
4	Bid Guarantee (SF24)	2
Volume 2	Drawings	45

Attachment No. 1

Appendix A

BOULDER CANYON PRESSURE REGULATOR CONTROL SYSTEM

Reference is made unless otherwise noted to diagrammatic layout as shown on Drawing 1705-IA-2. The detail design and location of various parts shown can be checked from the main drawings.

When the pressure regulator is seated and gates are closed, the piston is at or near Y end of the cylinder. As the wicket gates open, the cylinder moves toward the left of drawing and as the regulator and piston are stationary, oil is by-passed from X to Y side through check valve A. This check is adjustable although it is intended to have the maximum lift to keep down the pressure necessary to exhaust oil from X. When the gates have opened to full stroke or any part stroke, pressure is equalized in X and Y and valve A seats itself.

When the gates close, pressure is at once built up in Y: if the gate motion is slow or of small amount there is slippage enough through the small adjustable by-pass E to prevent the pressure regulator from opening; if gate stroke is fast, pressure is built up in Y and connection rod lifts the control valve of pressure regulator and the latter opens with the closing stroke of the gates.

As soon as the closing movement of gates stops, the pressure on control valve of regulator causes the oil in Y to by-pass through E to X until pressure regulator is seated or the gates start to open.

The upward movement of by-pass E is limited by rod C and the latter is adjustable by screw G. It is expected that the pressure regulator will close in 40 to 60 seconds for full stroke and this and a wider range of adjustment can be obtained through the setting of E.

If the turbine gates have made a partial or complete closing stroke and the regulator is closing when gates open, then excess pressure is built up in X which lifts check valve A and allows the regulator to move toward its seat at the same rate as the gates open and when regulator is on its seat, the gates can continue to open in the same way as outlined in paragraph two.

If the pressure regulator should fail to open when the gates are closing faster than the slippage allowed by opening in by-pass E, then a stalling of the gate closure takes place as follows:

Piston H is held up against adjusting screw G by spring J which is calibrated and adjusted against compression up to a pressure in Y considerably in excess of maximum operating pressures: if gates close and regulator fails to move, high pressure is

immediately built up in Y and through the connecting pipe and passage F to the top of piston H which moves downward and carries rod C and by-pass E to its seat. The whole connecting mechanism from gate ring to pressure regulator is then locked except the slow slippage around piston rings which will allow turbine gates to close slowly.

If the pressure regulator begins to open in normal manner, then pressure in X and Y will be as usual during operation and spring J will force piston H up to its position. A like restoration to normal operation will occur if the gates stop their closing stroke or start to open.

The compression of spring J can be changed by altering the position of piston H on stem C, and this adjustment is independent of the setting of opening for by-pass E.

If it is desired to operate the pressure regulator as a synchronous by-pass, it is necessary to move the dashpot piston to the right as shown on tracing 1705-IA-2 and lift the control valve and open the pressure regulator to full stroke or such part stroke as will correspond to full gate opening or such gate opening as set by gate limit stop on the governor.

The above is accomplished by four-way valve K which receives oil from the governor system and exhausts to governor sump tank and connection is made by means of flexible steel hose. Four-way valve K is separated from the two way ends of the cylinder by cut-off valves which are closed during normal operation and the control handle is secured in neutral position. With pressure on four-way valve, the handle is moved to position to open regulator and the piston stroke is followed up by moving collar T-2 until desired opening has been reached and then the control valve is cut to or toward neutral and collar T-2 locked in place at inside end of cylinder head extension and collar T-1 at outer end of same. The time of opening pressure regulator has been reduced to such point that there can be no danger of negative surges or water hammer if valve K is full open. Four-way valve K positions regulator opening relative to closed turbine gates, then positioning is locked with T-1 and T-2 and K is put to neutral.

There will be some small slippage of piston toward closing of regulator through by-pass E if four-way valve is set at neutral, but this can be taken care of by raising the control a little beyond desired setting and bringing the collar T-2 to correct point and allowing the regulator to close until collar is in contact.

Since the regulator has a nominal discharge capacity of 80% of quantity passing through turbine, it is preferable to lift the regulator about 5% beyond the full or limited gate stroke to avoid a mechanical jamming of connected parts if the regulator and control valve of same should set before the turbine stroke reached full or limited position.

When the unit is shut down, the pressure regulator can be returned to closed position by unlocking collar T-1, raising regulator a little and backing collar T-2 to extreme

position against stop and then setting four-way valve "K" in neutral and the dashpot will overhaul and pressure regulator slowly seat itself.

The same method will change operation from a synchronous by-pass to a relief valve.

A small reserve tank L has been provided to take care of any leakage on either end of cylinder. This tank is separated from cylinder by ball check valves which prevent oil being discharged in to tank under pressure but allow oil to flow into either end of cylinder at atmospheric pressure. This tank L is fitted with gauge glass and oil can be supplied to it by a connection to governor system or through the vent in top.

When the head exceeds 475 ft. it will be necessary to limit the stroke of the turbine gates, therefore, the stroke of pressure regulator must be increased a corresponding amount and this can be done by setting nut T-1 at such point that the limited gate opening will bring the extension of dash pot cylinder to or near contact with T-1. It will then be impossible for the sum of openings of the gates and pressure regulator to exceed the allowable maximum opening of the wheel.

Attachment No. 2

GENERAL DECISION NV010005 07/13/01 NV5
General Decision Number NV010005

Superseded General Decision No. NV000005

State: Nevada

Construction Type:

HEAVY
HIGHWAY

County(ies):

CARSON CITY	EUREKA	NYE
CHURCHILL	HUMBOLDT	PERSHING
CLARK	LANDER	STOREY
DOUGLAS	LINCOLN	WASHOE
ELKO	LYON	WHITE PINE
ESMERALDA	MINERAL	

HEAVY AND HIGHWAY CONSTRUCTION PROJECTS (Except construction projects at the **NEVADA** TEST SITE and TONOPAH TEST RANGE)
(and Excluding Water Well Drilling)

Modification Number	Publication Date
0	03/02/2001
1	05/04/2001
2	06/22/2001
3	07/13/2001

COUNTY(ies):

CARSON CITY	EUREKA	NYE
CHURCHILL	HUMBOLDT	PERSHING
CLARK	LANDER	STOREY
DOUGLAS	LINCOLN	WASHOE
ELKO	LYON	WHITE PINE
ESMERALDA	MINERAL	

CARP0034L 07/01/1998

	Rates	Fringes
CARSON CITY, CHURCHILL, DOUGLAS, ELKO, EUREKA, HUMBOLDT, LANDER, LYON, MINERAL, PERSHING, STOREY, WASHOE AND WHITE PINE COUNTIES		

DIVER STANDBY	27.65	12.425
DIVER WET	38.90	12.425
DIVER TENDER	27.65	12.425

PILE DRIVERS:

(Bridge, Warf & Dock Builders)	25.65	12.425
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* CARP0971E 07/01/2001

	Rates	Fringes
CHURCHILL, DOUGLAS, ELKO, EUREKA, HUMBOLDT, LANDER, LYON, MINERAL, PERSHING, STOREY, WASHOE, AND WHITE PINE.		

CARPENTERS	24.95	5.75
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CARP1780A 07/01/1999

	Rates	Fringes
CLARK, ESMERALDA, LINCOLN AND NYE COUNTIES		

CARPENTERS:

30 Mile radius around

Las Vegas (Measured from the intersection of Maryland Parkway and Charleston Blvd.)	27.18	7.65
30 to 50 Mile radius around Las Vegas (same as above)	28.68	7.65
Over 50 mile Mile radius around Las Vegas (same as above)	30.43	7.65
Laughlin Area	29.18	7.65

ELEC0357F 06/01/1999

	Rates	Fringes
CLARK, LINCOLN, AND NYE (South of the Mt. Diablo Base Line)		
COUNTIES		
ELECTRICIANS	27.90	10.21+3%

ELEC0357G 07/01/1997

	Rates	Fringes
CLARK, LINCOLN, AND NYE COUNTIES		
LINE CONSTRUCTION WORKERS:		
Area bound by a 30 mile radius from the intersection of Main Street and Fremont Street in Las Vegas (Free Area)		
Groundman	17.98	5.95+3%
Line Equipment Operators	21.86	5.95+3%
Lineman	24.45	5.95+3%
Area between a 30 mile radius and 60 mile radius from Main and Fremont Streets		
Groundman	18.98	5.95+3%
Line Equipment Operators	22.86	5.95+3%
Lineman	25.45	5.95+3%
Area Over 60 mile radius from Main and Fremont Streets		
Groundman	20.98	5.95+3%
Line Equipment Operators	24.86	5.95+3%
Lineman	27.45	5.95+3%

* ELEC0401F 06/01/2001

	Rates	Fringes
CHURCHILL, DOUGLAS, ELKO, ESMERALDA, EUREKA, HUMBOLDT, LANDER, LYON, MINERAL, PERSHING, STOREY, WASHOE, AND WHITE PINE COUNTYS.		
ELECTRICIANS:		
ELECTRICAINS	26.21	7.10+3%
CABLE SPLICER	28.78	7.10+3%

ELEC0401G 02/01/1993

CHURCHILL, DOUGLAS, ELKO, ESERALDA, EUREKA, LANDER, LYON,
MINERAL, PERSHING, STOREY, WASHOE, AND WHITE PINES COUNTYS.

LINE CONSTRUCTION:

	Rates	Fringes
Lineman	21.74	5.34+3-3/4%
Cable Splicer	23.91	5.34+3-3/4%
Equipment Operator	19.57	5.34+3-3/4%
Groundman	14.13	5.34+3-3/4%

ENGI0012H 08/01/1999

HYDRAULIC SUCTION AND CLAMSHELL DREDGES

	Rates	Fringes
Leverman	34.20	8.00
Deck Captain	31.30	8.00
Dozer	30.73	8.00
Watch Engineer, Welder and Deckmate	30.62	8.00
Winchman (Stern Winch) (on dredge)	30.07	8.00
Deckhand (can operate anchor scow under direction of mate), Bargeman	29.53	8.00
Barge mate	30.14	8.00

ENGI0012J 07/01/2000

CLARK, ESERALDA LINCOLN AND NYE COUNTIES

POWER EQUIPMENT OPERATORS:

	Rates	Fringes
Group 1	28.54	8.30
Group 2	29.49	8.30
Group 3	29.78	8.30
Group 4	30.67	8.30
Group 5	31.77	8.30
Group 6	30.89	8.30
Group 7	31.99	8.30
Group 8	31.00	8.30
Group 9	32.10	8.30
Group 10	31.12	8.30
Group 11	32.22	8.30
Group 12	31.29	8.30
Group 13	31.39	8.30
Group 14	31.42	8.30
Group 15	31.50	8.30
Group 16	31.62	8.30
Group 17	31.79	8.30
Group 18	31.89	8.30
Group 19	32.00	8.30
Group 20	32.12	8.30
Group 21	32.29	8.30
Group 22	32.39	8.30
Group 23	32.50	8.30
Group 24	32.62	8.30

CRANES, PILEDIVING & HOISTING EQUIPMENT

Group 1	29.29	8.30
Group 2	30.24	8.30

Group 3	30.53	8.30
Group 4	30.67	8.30
Group 5	30.89	8.30
Group 6	31.00	8.30
Group 7	31.12	8.30
Group 8	31.29	8.30
Group 9	31.46	8.30
Group 10	32.46	8.30
Group 11	33.96	8.30
Group 12	34.46	8.30
Group 13	35.46	8.30

TUNNEL GROUP:

Group 1	30.74	8.30
Group 2	31.03	8.30
Group 3	31.17	8.30
Group 4	31.39	8.30
Group 5	31.50	8.30
Group 6	31.62	8.30
Group 7	31.79	8.30

From the City Hall of Las Vegas

20 Miles to 40 Miles - add \$1.50 per hour to wage rates

40 Miles to 60 Miles - add \$2.50 per hour to wage rates

Over 60 Miles - add \$3.00 per hour to wage rates

POWER EQUIPMENT OPERATOR CLASSIFICATIONS:

GROUP 1: Bargeman, brakeman, compressor operator (when more than five (5) 900 CFM or larger units, additional operator required), ditch witch, with seat or similar type equipment, elevator operator - inside, engineer oiler, generator operator, generator, pump or compressor plant operator, pump operator, signalman, switchman

GROUP 2: Asphalt - rubber plant operator, concrete mixer operator - skip type, conveyor operator, fireman, hydrostatic pump operator, oiler crusher (asphalt or concrete plant), skiploader (when wheel type up to 3/4 yd. without attachment), soils field technician, tar pot fireman, temporary heating plant operator, trenching machine oiler, nurse tank operator.

GROUP 3: Asphalt - rubber blend operator, equipment greaser (rack), ford ferguson (with dragtype attachments), helicopter radioman (ground), power concrete curing machine operator, power concrete saw operator, power - driven jumbo form setter operator, stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman, backhoe operator (mini-max or similar type), boring machine operator, boxman or mixerman (asphalt or concrete), chip spreading machine operator, concrete pump operator (small portable), drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum), equipment greaser (grease truck), guard rail post driver operator, highline cableway signalman, hydra-hammer-aero stomper, power sweeper operator, roller operator (compacting),

screed operator (asphalt or concrete), trenching machine operator (up to 6ft.), concrete cleaning decontamination machine operator, power concrete curing machine operator,

GROUP 5: Equipment Greaser (Grease Truck)

GROUP 6: Asphalt plant engineer, batch plant operator, bit sharpener, concrete joint machine operator (canal and similar type), concrete planer operator, deck engine operator, derrickman (oilfield type), drilling machine operator, bucket or auger types (Caldwell 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum), drilling machine operator, hydrographic seeder machine operator (straw, pump or seed), Jackson track maintainer, or similar type, Kalamazoo switch tamper, or similar type, machine tool operator, Maginnis internal full slab vibrator, mechanical berm, curb or gutter (concrete or asphalt), mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar type), pavement breaker operator (truck mounted), road oil mixing machine operator, roller operator (asphalt or finish), rubber - tired earth moving equipment (single engine, up to and including 25 yds. struck), self-propelled tar pipelining machine operator, skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.), slip form pump operator (power driven hydraulic lifting device for concrete forms), tractor operator - bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types), tugger hoist operator

GROUP 7: Asphalt or concrete spreading operator (tamping or finishing), asphalt paving machine operator (Barber Greene or similar type - 1 screedman required), Asphalt -rubber distributor operator, backhoe operator (up to and including 3/4 yd.), small Ford, Case or similar, cast-in-place pipe laying machine operator, combination mixer and compressor operator (gunite work), compactor operator (self-propelled), concrete mixer operator (paving), crushing plant operator, drill doctor, drilling machine operator, bucket or auger types (Caldwell 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum), elevating grader operator, grade checker, gradall operator, grouting machine operator, **heavy**-duty repairman, kalamazoo ballast regulator or similar type, Kolman belt loader and similar type, Le Tourneau blob compactor or similar type, loader operator (Athey, Euclid, Sierra and similar types), pneumatic concrete placing machine operator (Hackley-Presswell or similar type), pumpcrete operator, rotary drill operator (excluding caisson type), rubber-tired earth-moving equipment operator (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck), rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck), rubber-tired scraper operator (self-loading paddle wheel type - John Deere, 1040 and similar single unit), self-propelled curb and gutter machine operator, skipload operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.), surface heaters and planer operator, tractor compressor drill combination operator, tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar - bulldozer, tamper, scraper and push tractor single engine), tractor operator (boom attachments), traveling pipe wrapping, cleaning and bending machine operator, trenching machine operator (over 6 ft. depth capacity, oiler required)

GROUP 8: **Heavy** duty repairman

GROUP 9: Drilling machine operator, bucket or auger types
(Caldwell 200 B bucket or similar types - Watson 3000 or 5000

auger or similar types - Texoma 900 auger or similar types - drilling depth of 105' maximum), dual drum mixer, monorail locomotive operator (diesel, gas or electric), motor patrol - blade operator (single engine), multiple engine tractor operator (Euclid and similar type - except Quad 9 cat.), rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck), rubber-tired earth-moving equipment operator (multiple engine, Euclid, Caterpillar and similar over 25 yds. and up to 50 yds.), tower crane repair person, tractor loader operator (crawler and wheel type over 6-1/2 yds.), Woods mixer operator (and similar pugmill equipment)

GROUP 10: Dynamic compactor LDC350 (or similar types)

GROUP 11: Auto grader operator, automatic slip form operator, drilling machine operator, bucket or auger types (Caldwell, auger 20 CA or similar types - Watson auger 6000 or similar types - drilling depth of 175' maximum), hoe ram or similar with compressor, mass excavator operator, mechanical finishing machine operator, mobile form traveler operator, motor patrol operator (multi-engine), pipe mobile machine operator, rubber-tired earth-moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck), rubber-tired self-loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 12: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 13: Canal liner operator, canal trimmer operator, remote-control earth-moving equipment operator, wheel excavator operator

GROUP 14: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck), rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine - up to and including 25 yds. struck)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck), rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck), tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 17: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 18: Rotex concrete belt operator (or similar types), rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, including compaction units - single engine,

Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck), rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck),

GROUP 19: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck), rubber-tired earth moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck), rubber-tired earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system

(single engine, over 50 yds. struck), rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 24: Concrete pump operator - truck mounted (oiler required when boom over 105' or 36 meters), rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

CRANES, PILEDIVING AND HOISTING EQUIPMENT CLASSIFICATIONS:

GROUP 1: Engineer oiler; Fork lift operator (under 5 tons capacity)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Fork lift operator (over 5 tons); Hoist operator (Chicago boom and

similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist operator; Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guyderrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds. mrc)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane operator; Polar crane operator; Tower crane operator

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy

derrick or similar type (over 50 tons up to and including 100 tons mrc)

GROUP 11: Crane operator (over 100 tons and up to and including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorman (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons); Welder - general

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; **Heavy**-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: **Heavy** duty repairman - welder combination

GROUP 7: Tunnel mole boring machine operator

 ENGI9993D 07/01/2000

Rates Fringes
 CHURCHILL, DOUGLAS, ELKO, EUREKA, HUMBOLDT, LANDER, LYON,
 MINERAL, PERSHING, STOREY, WASHOE, WHITE PINE AND CARSON
 CITY

POWER EQUIPMENT OPERATORS
 (Except Piledriving and Steel Erection)

AREA 1:

Group 1a	25.33	8.21
Group 2	25.86	8.21
Group 3	26.13	8.21
Group 4	26.87	8.21
Group 5	27.17	8.21
Group 6	27.34	8.21
Group 7	27.59	8.21
Group 8	28.18	8.21
Group 9	28.50	8.21
Group 10	28.85	8.21
Group 10a	29.04	8.21
Group 11	29.28	8.21
Group 11a	30.92	8.21
Group 11b	31.73	8.21

PILEDIVING

AREA 1:

Group 1	37.32	8.21
Group 1a	31.38	8.21
Group 1b	29.46	8.21
Group 2	35.80	8.21
Group 2a	31.17	8.21
Group 2b	29.26	8.21
Group 3	34.35	8.21
Group 3a	30.95	8.21
GROUP 3b	29.03	8.21
Group 4	32.84	8.21
Group 5	31.73	8.21
Group 6	30.62	8.21
Group 7	29.66	8.21
Group 8	27.80	8.21

STEEL ERECTION

AREA 1:

Group 1	37.87	8.21
Group 1a	31.70	8.21

Group 1b	29.74	8.21
Group 2	36.36	8.21
Group 2a	31.45	8.21
Group 2b	29.53	8.21
Group 3	35.12	8.21
Group 3a	31.23	8.21
Group 3b	29.31	8.21
Group 3c	34.76	8.21
Group 4	33.39	8.21
Group 5	32.29	8.21

POWER EQUIPMENT OPERATOR CLASSIFICATIONS
CHURCHILL, DOUGLAS, ELKO, EUREKA, HUMBOLDT, LANDER, LYON,
MINERAL, PERSHING, STOREY, WASHOE, WHITE PINE, CARSON CITY

(EXCLUDING PILEDRIVING AND STEEL ERECTION)

GROUP 1a: Oiler; Partsman (**heavy** duty repair shop partsroom when needed).

GROUP 2: Compressor; Material Loader and/or Conveyor (handling building materials); Pump Operator

GROUP 3: Bobcat or similar loader (1/4 cu. yd. or less); Concrete Curing Machines (streets, highways, airports, canals); Conveyor belt operator(tunnel); Forklift (under 20 ft.); Engineer Generating plant (500 K.W.); Mixer box operator (concrete plant); Motorman; Rotomist Operator; Screedman (except asphaltic or concrete paving); Oiler (truck crane)

GROUP 4: Concrete mixer, skip type; Dinky; Forklift (20' and over) or Lumber stacker; Ross Carrier; Skip Loader (under 1 cu. yd); Tie Spacer.

GROUP 5: Concrete mixer (over 1 cu. yd); concrete pumps or pumpcrete guns; Elevator and material Hoist (1 drum); Groundman for Asphalt Milling and similar.

GROUP 6: Auger type drilling equipment up to and including 30 ft. depth digging capacity m.r.c.; Boom Truck or Dual Purpose "A" Frame Truck; B.L.H. Lima road pactor or similar; Chip box spreader (flaherty type or similar); Concrete batch plant (wet or dry); Concrete saws (highways, streets, airports, canals); Locomotive (over 30 tons); Lubrication and service engineer (mobile & grease rack); Maginnis international full slab vibrator (airports, highways, canals, warehouses); Mechanical finishers (concrete)(clary, Johnson, Bidwell Bridge Deck or similar types); Mechanical Burn, Curb and/or Curb and Gutter Machine (concrete or asphalt); Pavement breaker, truck mounted, with compressor combination; Pavement breaker or tamper (with or without compressor (combination); Power Jumbo (setting slip-forms, etc. in tunnels); Roller (except asphalt); Self-propelled tape machine; Self-propelled compactor (single engine); Self-propelled power sweeper; slip form pump (power-driven by hydraulic, electric, air, gas, etc. lifting device for concrete forms); Small Rubber-tired Tractors; Snooper Crane, Paxton-Mitchell or similar; Stationary Pipe Wrapping, Cleaning and Bending Machine Operator

GROUP 7: Auger type drilling equipment over 30 ft. depth digging capacity m.r.c.; Compressor (over 2); Concrete conveyor or concrete pump, truck equipment mounted (boom length to apply); Concrete conveyor, building site; Drilling and boring Machinery,

vertical and horizontal (not to apply to waterliners, wagon drills or jackhammers); Crusher Plant Engineer; Generators; Kolman Loader; Material Hoist (2 or more drums); Mechanical finishers or spreader machine (asphalt, Barber-Greene and similar); (Screedman required); Mine or shaft hoist; Pipe bending machines (pipelines only); Pipe cleaning machines (tractor propelled and supported); Pipe wrapping machines (tractor propelled and supported); Portable crushing and screening plants; Post driller and/or driver; Pumps (over 2); Roller operator (asphalt); Screedman (except asphaltic or concrete paving; Screedman (Barber-Green and similar)(Asphaltic or concrete paving); Self-propelled boom-type lifting device (center amount) (on 10 ton capacity or less); Slusher; Soil tester (certified); Soils and material tester; Surface heater and planer; Trenching machine (maximum digging capacity 3 feet depth); Truck type loader; Welding machines (gasoline or diesel).

GROUP 8: Asphalt plant Engineer; Asphalt milling machine; Cast-in-place pipe laying machine; Combination slusher and motor op.; Concrete batch plant (multiple units); Dozer Operator; Drill doctor; Elevating grader; Gradesetter, Grade checker; Grooving and grinding machine (highway); **Heavy** duty repairman and/or welder; Ken-seal; Loader (up to and including 2 1/2 cu. yds.); Mechanical trench shield; Mixermobile; Push cats; Road oil mixing machine (wood-mixer and other similar pugmill equipment); Rubber-tired earth-moving equipment (up to and including 35 cu. yds."struck" M.R.C. Euclid, T-pulls, DW's 10, 20, 21, and similar); Self-propelled compactor with dozer; Hyster 450 or cat 825 or similar; Sheepfoot; Small tractor (with boom); Soil stabilizer (P & H or equal); Timber skidder (rubber-tired and/or similar equipment); Tractor-drawn scraper; Tractor; Tractor-mounted compressor drill combination; Trenching machine (over 3 feet depth); Tri-batch paver; Tunnel badger or tunnel boring machine; Tunnel mole boring machine; Vermeer T-600b rock cutter.

GROUP 9: Chicago boom; Combination backhoe and loader (up to and including 3/8 yard); Combination mixer and compressor (gunite); Lull hi-lift (20 feet or over); Mucking machine; Sub-grader (gurries or other types); Tractor (with boom) (D6 or larger); Track-laying-type earthmoving machine (single engine with tandem scrapers).

GROUP 10: Boom-type backfilling machine; Bridge crane; Caryliff or similar; Chemical grouting machine; Derricks (two (2) Group 10 operators required when swing engine remote from hoist); Derrick barges (except excavation work); Euclid loader and similar types; **Heavy**-Duty rotary drill rigs; Lift-slab (vagtborg and similar types); Loader (over 2 1/2 cu yds. up to and including 4 cu. yds); Locomotive (over 100 tons) (single or multiple units); Multiple-Engine earth-moving machines (euclid, dozers, etc.); Pre-stress wire-wrapping machine; Rubber-tried scraper, self-loading; Single-engine scraper (over 35 cu. yds); Shuttle car (reclaim station); Train loading station; Trenching machine multi-engine with sloping attachment (jefco or similar); Vacuum cooling plant; Whirley crane (up to and including 25 tons).

GROUP 10a: Backhoe (up to and including 1 cu. yd hydraulic); Backhoe (up to and including 1 cu. yd. cable); CMI dual lane auto-grader SP30 or similar; Cranes (not over twenty five (25) tons (hammerhead and gantry); Finish Blade; Gradalls (up to and including 1 cu. yd); Motor patrol; Power shovels, Clamshells, Draglines, Cranes (up to and including 1 cu. yd.); Rubber-tried

scraper, self-loading (twin-engine); Self-propelled boom-type lifting device (center mount) (over 10 tons up to and including 25 tons).

GROUP 11: Automatic asphalt or concrete slip-form paver; Automatic railroad car dumper; Canal trimmer; Cargy lift, Campbell or similar; Cranes (over 25 tons); Euclid loader when controlled from the pullcat; Highline cableway operator; Loader (over 4 cu yds. up to and including 12 cu. yds.); Multi-Engine earthmoving equipment (up to and including 75 cu. yds. "struck M.R.C."); Multiple Engine Scrapers (when used to push pull); Power shovels, Clam-shells, Draglines, Backhoes, Graders (over 1 cu. yd. and up to and including 7 cu. yds. M.R.C.); Self-propelled Boom type lifting device (over 25 tons M.R.C.); Self-propelled Compactor (with multiple propulsion power units); Single-engine rubber-tyred earthmoving machine (with tandem scraper); Slip-form paver (concrete or asphalt) (one (1) Operator and two (2) screedman); Tandem cats and scrapers; Tower crane mobile (including rail-mounted); Truck-mounted hydraulic crane when remote-control equipped (over 10 tons up to and including 25 tons); Universal Liebherr and tower cranes (and similar types) (in the erection, dismantling and moving of equipment there shall be an additional operating engineer at group 8 rates); Wheel excavator (up to and including 750 cu. yds. per hour); Whirley cranes (over 25 tons).

GROUP 11a: Band wagons (in conjunction with wheel excavators); Operator of helicopter (when used in construction work); Loaders (over 12 cu. yds.); Multi-engine earthmoving equipment (over 75 cu. yds. "struck" M.R.C.); Power shovels, Clamshells, Draglines, Backhoes and Graders (over 7 cu. yds. M.R.C.); Remote-controlled Earthmoving equipment; Wheel excavator (over 750 cu. yds. per hour) (two (2) Group 11A operators required).

GROUP 11b: Holland loader or similar or loader (over 18 cu. yds)

PILEDIVING CLASSIFICATIONS

GROUP 1: Derrick barge pedestal mounted over 100 tons; Clamshells over 7 cu. yds.; Self propelled boom type lifting device over 100 tons; Truck crane or crawler, land or barge mounted over 100 tons;

GROUP 1a: Truck crane oiler.

GROUP 1b: Oiler

GROUP 2: Derrick barge pedestal mounted 45 tons up to and including 100 tons; Clamshells up to and including 7 cu. yds; Self propelled boom type lifting device over 45 tons; Truck crane

or crawler, land or barge mounted over 45 tons up to and including 100 tons.

GROUP 2a: Truck crane oiler.

GROUP 2b: Oiler

GROUP 3: Derrick barge pedestal mounted under 45 tons; self propelled boom type lifting device 45 tons and under; Skid/Scow Piledriver, any tonnage; (any assistance required shall be by an employee covered by this agreement); Truck crane or crawler, land or barge mounted 45 tons and under.

GROUP 3a: Truck Crane oiler

GROUP 3b: Oiler

GROUP 4: Forklift, 10 tons and over

GROUP 5: No current classification.

GROUP 6: Deck engineer

GROUP 7: No current classification

GROUP 8: Deckhand, Fireman

STEEL ERECTORS AND FABRICATORS

GROUP 1: Cranes, over 100 tons; Derrick over 100 tons, Self-propelled boom type lifting devices over 100 tons.

GROUP 1a: Truck crane oiler.

GROUP 1b: Oiler

GROUP 2: Cranes, over 45 tons up to and including 100 tons; Derrick 100 tons and under, Self-propelled boom type lifting device, over 45 tons; Tower Crane.

GROUP 2a: Truck crane oiler.

GROUP 2b: Oiler

GROUP 3: Cranes, 45 tons and under; Self propelled boom type lifting device, 45 tons and under

GROUP 3a: Truck crane oiler

GROUP 3b: Hydraulic

GROUP 3c: Oiler

GROUP 4: Chicago boom; Forklift, 10 tons and over; **Heavy** Duty Repairman/Welder.

GROUP 5: Boom cat

AREA DEFININITIONS AND PAY RATES

AREA 1:

ALL AREA FALLING WITHIN 50 ROAD MILES OF EITHER THE CARSON CITY COURTHOUSE OR THE WASHOE COUNTY COURHOUSE SHALL BE CONSIDERED FREE AREA.

AREA 2:

ALL WORK FALLING BETWEEN 50 AND 150 ROAD MILES OF THE WASHOE COUNTY COURTHOUSE SHALL BE COMPUTED AT AN ADDITIONAL \$1.50 PER HOUR ABOVE THE BASE RATE.

AREA 3:

ALL WORK FALLING BETWEEN 150 AND 300 ROAD MILES OF THE WASHOE COUNTY COURTHOUSE SHALL BE COMPUTED AT AN ADDITIONAL \$2.00 PER HOUR ABOVE THE BASE RATE.

AREA 4:

ANY WORK PERFORMED IN EXCESS OF 300 ROAD MILES OF THE WASHOE COURTHOUSE SHALL BE COMPUTED AT AN ADDITIONAL \$3.00 PER HOUR ABOVE THE BASE RATE.

ENGI9993K 07/01/1997

CHURCHILL, DOUGLAS, ELKO, EUREKA, HUMBOLDT, LANDER, LYON, Rates Fringes

MINERAL, PERSHING, STOREY, WASHOE, WHITE PINE AND CARSON
CITY

HYDRAULIC SUCTION & CLAMSHELL & DIPPER DREDGE

GROUP 1:		
Area 1	31.04	11.89
Area 2	33.04	11.89
GROUP 2:		
Area 1	26.08	11.89
Area 2	28.08	11.89
GROUP 3:		
Area 1	24.96	11.89
Area 2	26.96	11.89

DREDGING CLASSIFICATIONS

GROUP 1:
Day Mate (Captain); Leverman/Operator

GROUP 2:
Booster Pump Operator, Deck Engineer, Deck Mate, Dredge Dozer;
Dredge Tender; **Heavy** Duty Repairman; Watch Engineer; Winchman

GROUP 3:
Bargeman; Deckhand; Fireman; Leveehand; Oiler

AREA DEFININITIONS

AREA 1:
ALL AREA FALLING WITHIN 50 ROAD MILES OF EITHER THE CARSON CITY
COURTHOUSE OR THE WASHOE COUNTY COURHOUSE SHALL BE CONSIDERED
FREE AREA.

AREA 2:
ALL WORK FALLING BETWEEN 50 AND 150 ROAD MILES OF THE WASHOE
COUNTY COURTHOUSE.

AREA 3:
ALL WORK FALLING BETWEEN 150 AND 300 ROAD MILES OF THE WASHOE
COUNTY COURTHOUSE.

AREA 4:
ANY WORK PERFORMED IN EXCESS OF 300 ROAD MILES OF THE WASHOE
COURTHOUSE.

IRON0027J 07/01/2000		
	Rates	Fringes
ELKO, EUREKA, AND WHITE PINE COUNTIES		
IRON WORKERS:		
Fence Erectors: Machinery Movers		
Ornamental: Reinforcing. Rigger		
Structural	21.52	7.86

* IRON0155B 07/01/2001

	Rates	Fringes
CHURCHILL, CLARK, DOUGLAS, ESMERALDA, HUMBOLDT, LANDER, LINCOLN, LYON, MINERAL, NYE, PERSHING, STOREY, WASHOE, AND WHITE PINE		

COUNTIES

IRONWORKERS:

STRUCTURAL, ORNAMENTAL AND REINFORCING	26.08	14.575
FENCE ERECTORS (Excluding Clark County)	25.19	14.575

LABO0169F 10/01/2000

	Rates	Fringes
CHURCHILL, DOUGLAS, ELKO, EUREKA, HUMBOLDT, LANDER, LYON, MINERAL, PERSHING, STOREY, WASHOE, WHITE PINE, CARSON CITY		

Group 1	18.85	4.82
Group 1-A	15.98	4.82
Group 2	18.95	4.82
Group 3	19.10	4.82

Group 4	19.35	4.82
Group 5	19.65	4.82
Group 6	19.65	4.82
Group 7	19.35	4.82
Group 8	19.00	4.82
Group 9	13.69	4.82

From the Washoe County Courthouse
 50 Miles to 150 Miles - add \$1.50 per hour to wage rates
 150 Miles to 300 Miles - \$2.00 per hour to wage rates
 Over 300 Miles - add \$3.00 per hour to wage rates

CLASSIFICATIONS

GROUP 1: All cleanup work of debris, grounds and building including windows and tile; dump or spotter (other than asphalt); general laborers; limber, brushloader and piler

GROUP 1-A: Flagmen

GROUP 2: Choker setter or rigger (clearing work only); Pittsburgh chipper and similar type brush shredders; concrete worker (wet or dry) all concrete work not listed in Group 3; crusher or grizzle tender; Guinea chaser (stake); panel forms (wood or metal) handling, cleaning and stripping of; loading and unloading of all rods and materials for reinforcing concrete; railroad track (builders); sloper; semi-skilled wrecker (salvaging of building materials other than those listed in Group 3).

GROUP 3: Asphalt workers (ironers, shoveler, cutting machine); buggymobile; chainsaw, faller, logloader and buckler; compactor (all types); concrete mixer, under 1/2 yd.; concrete pan work (breadpan type) (handling, cleaning, stripping); concrete saw, chipping, grinding, sanding, vibrator; cribbing, shoring, lagging, trench jacking, hand-guided lagging hammer; curbing or divider machine; curb setter (precast or cut); Ditching machine (hand-guided); driller's tender, chuck tender; form raiser, slip forms; grouting of concrete walls, windows and door jams; headerboard; jackhammer, pavement breaker, air spade; mastic worker (wet or dry); pipe wrapper, kettle, pot, and workers applying asphalt, Creosote and similar type materials; all power tools (air, gas or electric); post driver; riprap stonepaver and rock slinger, including placing of sack concrete, wet or dry; roto tiller; rigging and signaling in connection with

laborers work, sandblaster, pot men; vibrascreed; skilled wrecker (removing and salvaging of sash windows, doors, plumbing and electrical; fixtures)

GROUP 4: Burning and welding in connection with laborers' work; joy drill model TWM-2A, gardener denver model DN 143 and similar type drills; track drillers, diamond core drillers, wagon drillers, mechanical drillers on multiple units; high scalers; concrete pump; **heavy** duty vibrator with stinger 5" diameter or

over; pipelayer, caulker and bander; pipelayer - waterline, sewerline, gasline, conduit; asphalt rakers

GROUP 5: Blaster and powder, all work of loading, placing and blasting of all powder and explosive of any type, regardless of method used used for such loading and placing; asbestos removal; lead abatement, hazardous waste and material removal.

GROUP 6: Nozzlemen, Rodman

GROUP 7: Gunmen, Materialmen

GROUP 8: Reboundmen

GROUP 9: Landscaper

LABO0872D 07/01/2000

	Rates	Fringes
CLARK, ESMERALDA, AND LINCOLN COUNTIES; NYE COUNTY (South half, including Highway #6)		

LABORERS:

Group 1	21.58	7.46
Group 2	21.74	7.46
Group 3	21.84	7.46
Group 4	21.93	7.46
Group 5	22.02	7.46
Group 6	21.84	7.46
Group 7	18.53	7.46

30 - 50 Miles From City Hall, Las Vegas \$1.50 above the base rate.

50 - 70 Miles From City Hall, Las Vegas \$2.50 above the base rate.

Over 70 Miles From City Hall, Las Vegas \$3.00 above the base rate.

Laughlin Area \$2.25 above the base rate.

LABORER CLASSIFICATIONS

Group 1: Dry Packing of concrete and filling of form-bolt holes; fine grader, highway and street paving, airport runaways and similar type **heavy** construction; gas and oil pipeline laborer; guinea chaser; laborer, general; construction or demolition laborer; packing rod steel and pans; laborers; temporary water lines (portable type); landscape gardener and nursery worker (must have knowledge of plant materials and how to plant them lay out plant arrangements to-follow the landscape plan); tarman and mortarman; kettleman; potman and worker applying asphalt lay-kold creosote, lime and similar type materials ("applying"

means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); underground laborer, including caisson bellows; window cleaner; scaffold erector - (excludes tenders); fence erector - chain link; mortarless, barrier wall and/or retaining walls; mechanical stabilized earth wall; landscape decorative rock installer - ponds, water fall etc.; material handler - (incidental to trade).

Group 2: Asphalt raker, ironer, spreader, Luteman, buggymobile man; cement dumper (on 1 yard or larger mixers and handling bulk cement); cesspool digger and installer; chucktender (except tunnels); concrete core cutter; concrete curer, impervious membrane and oiler of all materials; concrete saw, excluding tractor type, cutting, scoring old or new concrete; gas and oil pipeline wrapper, pot tender and form; making and caulking of all non metallic pipe joints; operators and tenders of pneumatic and electric tools, vibrating machines, hand-propelled trenching machines, impact wrench, multiplate and similar mechanical tools not separately classified herein; operator of cement grinding machine; riprap stonepaver; roto-scraper; sandblaster (pot tender); scaler; septic tank digger and installer; tank scaler and cleaner; tree climber, faller, chain saw operator, pittsburgh chipper and similar type brush shredders

Group 3: Cutting torch operator; gas and oil pipeline wrapper; gas and oil pipeline laborer, certified; jackhammer and/or pavement breaker, laying of all non-metallic pipe, including landscape sprinklers, sewerpipe, drain pipe, and underground tile; mudcutter; concrete vibrator, all sizes; rock slinger; scaler (using Bos'n chair or safety belt or power tools); forklift (incidental to trade) a journeyman shall hold OSHA certification at time of referral.

Group 4: Cribber or shorer, lagging, sheeting, trenching bracing hand guided lagging hammer; head rock slinger; powder - blaster, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; sandblaster (nozzle operator); steel headerboard

Group 5: Driller (core, diamond or wagon); joy driller model TW-M-2a, Gardener-Denver Model DH 143 and similar type drills (in accordance with memorandum of understanding between laborers and operating engineers dated Miami, Florida, February 3, 1954); Gas and oil pipeline fusion; gas and oil pipeline wrappers, 6" pipe and over-

Group 6: Environmental specialist (asbestos abatement, lead abatement, Hazardous waste abatement, petro-chemical abatement, radiation remediation.

Group 7: Flag and Signal Person

LABO0872I 07/01/1999

Rates Fringes
CLARK, ESERALDA, AND LINCOLN COUNTIES; NYE COUNTY (South half,
including Highway #6)

LABORERS:

MINER AND BULLGANG

Group 1	23.07	7.48
Group 2	22.57	7.48
Group 3	22.32	7.48
Group 4	22.93	7.48
Group 5	22.57	7.48

30 - 50 Miles From City Hall, Las Vegas \$1.50 above the base rate.

50 - 70 Miles From City Hall, Las Vegas \$2.50 above the base rate.

Over 70 Miles From City Hall, Las Vegas \$3.00 above the base rate.

Laughlin Area \$2.25 above the base rate.

CLASSIFICATIONS

Group 1: Shaft, Raise, Stope Miner

Group 2: Miner - Tunnel (Hardrock)

Group 3: BullGang, Mucker, Trackman

Group 4: Miner - Welder

Group 5: Pipe Jacking, Micro-Tunneling, Tunnel Boring Machine

PAIN0159F 07/01/1999

	Rates	Fringes
CLARK, ESMERALDA, LINCOLN AND NYE COUNTIES		

PAINTERS:

Brush, Roller, Paperhangers, Spray, Sandblasters, Pot Tender, Nozzleman, Tapers, Marbleizing, Metal Leafing Sign Painters, Acid Staining, Graining and Buffing	24.27	5.05
Structural Steel Paint and Sandblasting, Buffing Steel	24.62	5.05
Special Coating	25.27	5.05
Steeplejack	26.02	5.05

PAIN0567E 10/01/1999

	Rates	Fringes
CARSON CITY, CHURCHILL, DOUGLAS, ELKO, EUREKA, HUMBOLDT, LANDER, LYON, MINERAL, PERSHING, STOREY, WASHOE AND WHITE PINE COUNTIES		

PAINTERS:

Brush and Roller	20.03	4.36
Spray; Paperhangers; and Sandblaster; Special Coatings Application - Brush	20.78	4.36
Structural Steel (not to in- clude stairways, tube steel, Q-decks & trust joints worked off powered lift in enclosed building); Steeplejack Brush/ Spray over 40 feet with open		

space below; Special Coatings		
Application - Spray	21.03	4.36
Special Coatings Application -		
Spray Steel	21.28	4.36
Drywall Taper	21.28	4.36
Steeplejack - Taper, over		
40 ft. with open space	22.18	4.36

PLAS0241G 10/01/1997

	Rates	Fringes
CHURCHILL, DOUGLAS, ELKO, ESERALDA, EUREKA, HUMBOLDT, LANDER, LYON, MINERAL, PERSHING, STOREY, WASHOE, AND WHITE PINE COUNTIES		

CEMENT MASONS		
Cement Masons	17.02	7.10
Mastic. magesite and all composition masons	17.27	7.10

PLAS0797G 07/01/1999

	Rates	Fringes
CLARK, ESERALDA, LINCOLN AND NYE COUNTIES		

CEMENT MASONS:

0 to 30 Miles from City		
Hall in Las Vegas	24.23	6.55
30 to 50 Miles from City		
Hall in Las Vegas	25.73	6.55
50 to 70 Miles from City		
Hall in Las Vegas	26.73	6.55
Over 70 Miles from City		
Hall in Las Vegas	27.73	6.55

PLUM0350G 02/01/2001

	Rates	Fringes
CHURCHILL, DOUGLAS, ELKO, EUREKA, HUMBOLDT, LANDER, LYON, MINERAL, PERSHING, STOREY, WASHOE, WHITE PINE, CARSON CITY COUNTIES, and NYE COUNTY (North of Hwy. #6 including the City of Tonopah)		

PLUMBERS & PIPEFITTERS	23.45	5.75
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* PLUM0525G 06/01/2001

	Rates	Fringes
CLARK, ESERALDA AND LINCOLN, COUNTIES; NYE COUNTY (South of Hwy. #6 including the City of Tonopah)		

PLUMBERS & PIPEFITTERS	30.01	10.61
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ROOF0162D 03/01/1999

	Rates	Fringes
ROOFERS	17.78	3.17

* SHEE0026C 07/01/2001

	Rates	Fringes
CHURCHILL, DOUGLAS, ELKO, EUREKA, HUMBOLDT, LANDER, LYON, MINERAL, PERSHING, STOREY, WASHOE, CARSON CITY AND NYE COUNTY		

(North of the First Standard Parallel Line north of the 38th
Parallel)

SHEET METAL WORKERS	25.83	8.77
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SHEE0088H 07/01/2000

	Rates	Fringes
CLARK, ESERALDA, AND LINCOLN COUNTIES; NYE COUNTY (South of the First Standard Parallel Line north of the 38th Parallel); WHITE PINE COUNTY		

SHEET METAL WORKERS	31.27	7.80
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TEAM0533A 01/01/1998

	Rates	Fringes
REMAINING COUNTIES AND NYE COUNTY (North of and including highway #6)		

TRUCK DRIVERS

All dump trucks (Single or
multiple dump units including
Semi's and Double and Transfer
units:

Under 4 yards (water level)
4 yards and under 8 yards
(water level)

16.62	7.40
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3 yards & under 18 yards
(water level)

16.84	7.40
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3 yards & under 25 yards
(water level)

17.05	7.40
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25 yards & under 60 yards
(water level)

17.64	7.40
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60 yards & under 75 yards
(water level)

19.08	7.40
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75 yards & under 100 yards
(water level)

19.82	7.40
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100 yards & over (water
level)

20.50	7.40
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150 yards & under 250 yards

22.50	7.40
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250 yards & under 350 yards

25.50	7.40
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Over 350 yards

27.00	7.40
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(Men regularly employed under-
ground on tunnel work shall be
paid forty-five (\$.45) cents per

hour for such work, provided that such employment underground on tunnel work continues for one (1) or more hours)

Bulk cement spreader (with or without Auger) Use dump truck scales.

Bootman (a bootman when employed on such equipment shall receive the rate specified for the classification of road oil trucks or bootman).

Transit Mix, Manufactures Rating:

Under 8 yards	17.05	7.40
8 yards & including 12 yards	17.16	7.40
Over 12 yards	17.38	7.40

Transit Mix with boom shall receive \$.12-1/2 cents per

hour above the appropriate yardage classification rate of pay when such boom is used.

Water Trucks:

Up to 2,500 gallons	16.84	7.40
2,500 gallons & over	17.05	7.40

Jetting truck (use appropriate water truck rate.

DW20's and 21's and other similar cat type, Terra cobra, Le Tourneau pulls, Tournerocker, Euclid and similar type equipment when pulling Aqua/pak, Water tank trailers and fuel and/or Grease Tank trailer or other miscellaneous trailers (except as defined under dump trucks.

17.33	7.40
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Heavy Duty Transport (High bed)	17.22	7.40
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Heavy Duty Transport (Gooseneck Low Bed)	17.22	7.40
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Tiltbed or Flatbed Pull Trailers	17.22	7.40
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Bootman, combination bootman and road oiler	17.11	7.40
---------------------------------------------	-------	------

Flat Rack (2 or 3 axle unit)	14.94	7.40
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Bus and Manhaul drivers:

Up to 18,000 lbs. (single unit)	16.67	7.40
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18,000 lbs & over (single unit)	16.78	7.40
Helicopter Pilot (when transporting men or materials)	30.66	7.40
Industrial Lift truck (use appropriate flat rack rate (mechanical tailgate)		
Lift Jitneys & Fork Lift	16.89	7.40
Winch Truck & "A" Frame Drivers:		
Under 18,000 lbs.	16.78	7.40
18,000 lbs. & over	16.89	7.40
Warehouse Spotters	16.23	7.40
Teamsters Warehouse Clerk	16.84	7.40
Tire Repairman	16.55	7.40
Truck Repairman	17.05	7.40
Pick-up Truck & Pilot Cars (Job Site)	14.74	7.40
Pick-up Truck & Pilot Car (over the road)	16.73	7.40
Truck Oil and Greaser	16.78	7.40
Fuel Truck Driver	16.78	7.40
Fuel Man & Fuel Island Man	16.78	7.40

When on grease and fuel truck, an Engineer Oil and Teamster Oil, work interchangeable servicing trucks and other equipment, The wage rate shall be identical.

AREA 1: All that area falling within fifty (50) road miles of either the Carson City or Washoe County Courthouse shall be considerer a free area.

AREA 2: All work falling between fifty (50) and (150) road miles of the Washoe County Courthouse shall be computed at and additional \$1.50 per hour.

AREA 3: All work falling between one hundred and fifty (150) and three hundred (300) road miles of the Washoe County Courthouse shall be computed at additional \$2.00 per hour.

AREA 4: Any work performed in excess of three hundred (300) road miles of the Washoe County Courthouse shall be computed at \$3.00 per hour.

TEAM0631A 07/01/1999

	Rates	Fringes
CLARK, ESERALDA, LINCOLN COUNTIES AND NYE COUNTY (South of and excluding Highway #6)		

TRUCK DRIVERS:

GROUP 1:	21.35	7.12
GROUP 2:	21.46	7.12
GROUP 3:	21.67	7.12
GROUP 4:	21.85	7.12
GROUP 5:	22.00	7.12
GROUP 6:	22.35	7.12

30 - 50 Miles from City Hall, Las Vegas \$1.00 above the base rate.

50 - 70 Miles from City Hall, Las Vegas \$2.00 above the base rate.

70 - 80 Miles from City Hall, Las Vegas \$3.00 above the base rate.

Over 80 Miles from City Hall, Las Vegas \$3.50 above the base rate.

Laughlin and Mesquite Areas, \$3.00 above the base rate.

Group 1: Dump trucks (less than 12 yards water level); trucks (legal payload capacity less than 15 tons); water and fuel trucks (under 2500 gallons); pickups; service; drivers of busses (on jobsite used for transportation of up to 25 passengers); teamster equipment (highest rate for dual craft operation); working flat rack driver.

Group 2: Dump trucks (12 yards but less than 16 yards water level); trucks (legal payload capacity between 15 and 20 tons); transit mix trucks (under 3 yds.; dumpcrete trucks (less than 6-1/2 yds. water level); gas and oil pipeline working truck drivers; including winch truck and all sizes of trucks; water and fuel truck drivers (2,500 gallon to 4,000 gallon); truck greaser; drivers of busses (on jobsite used for transportation of more than twenty-five (25) passengers); warehouse clerk.

Group 3: Dump trucks (16 yds. up to and including 22 yds. water level); driver of trucks (legal payload cap. 20 tons but less than 30 tons); dumpster trucks; drivers of transit-mix trucks (3 yds. but less than 6 yds.); dumpcrete trucks (6-1/2 yds. water level and over); fork lift driver; ross carrier driver; highway water and fuel drivers (4,000 gallons but less than 6,000 gallons); stock room clerk; tireman.

Group 4: Transit-mix trucks (6 yds. or more); dump trucks (over 22 yds. water level); trucks (legal payload capacity 30 tons and over); fuel and water trucks (6,000 gallons and over).

Group 5: Drivers of trucks and trailers in combination (seven axles or more).

Group 6: All offroad equipment; truck repairmen and drivers of road oil spreader trucks; D.W. 10 and D.W. 20 euclid-type equipment, letourneau pulls, terra cobras and similar types of equipment; also PB and similar-type trucks when performing work within Teamsters' jurisdiction, regardless of types of attachment including power unit pulling off highway belly dumps in tandem.

WELDERS - Receive rate prescribed for craft performing operation
to which welding is incidental.
=====

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates
listed under that identifier do not reflect collectively
bargained wage and fringe benefit rates. Other designations
indicate unions whose rates have been determined to be
prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can
be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a
position on a wage determination matter
- * a conformance (additional classification and rate)
ruling

On survey related matters, initial contact, including requests
for summaries of surveys, should be with the Wage and Hour
Regional Office for the area in which the survey was conducted
because those Regional Offices have responsibility for the
Davis-Bacon survey program. If the response from this initial
contact is not satisfactory, then the process described in 2.)
and 3.) should be followed.

With regard to any other matter not yet ripe for the formal
process described here, initial contact should be with the Branch
of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an
interested party (those affected by the action) can request
review and reconsideration from the Wage and Hour Administrator

(See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the
interested party's position and by any information (wage payment
data, project description, area practice material, etc.) that the
requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an

interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.
END OF GENERAL DECISION

Attachment No. 3

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
(Bureau or Office)

Contract Number

Date

RELEASE OF CLAIMS

WHEREAS, by the terms of the above-identified contract for

entered into by the United States of America, hereinafter also referred to as the United States, and the contractor

it is provided that after completion of all work, and prior to final payment, the contractor will furnish the United States with a release of all claims;

NOW, THEREFORE, in consideration of the above premises and the payment by the United States to the contractor of the amount now due under the contract, to wit, the sum of

dollars

(\$), the contractor hereby remises, releases, and forever discharges the United States, its officers, agents, and employees, of and from all manner of debts, dues, liabilities, obligations, accounts, claims, and demands whatsoever, in law and equity, under or by virtue of the said contract except:

IN WITNESS WHEREOF, the contractor has executed this release this day of , 20

(Contractor)

(Street Number of R.F.D.)

(City)

(State)

(Zip Code)

By

(Signature)

(Name -- Type or Print)

(Title)

COMPLETE ONLY IF CONTRACTOR IS A CORPORATION

I, CERTIFY That I am the , who
of the corporation named as contractor herein; that
signed this release on behalf of the corporation, was then of said corporation; and
that said release was duly signed for and on behalf of said corporation by authority of its governing body.

[Seal]

(Signature)

Attachment No. 4

BID BOND <i>(See instruction on reverse)</i>	DATE BOND EXECUTED <i>(Must not be later than bid opening date)</i>	OMB NO.: 9000-0045
--------------------------------------------------------	---------------------------------------------------------------------	--------------------

Public reporting burden for this collection of information is estimated to average 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretariat (MVR), Federal Acquisition Policy Division, GSA, Washington, DC 20405.

PRINCIPAL <i>(Legal name and business address)</i>	TYPE OF ORGANIZATION <i>("X" one)</i> <input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> JOINT VENTURE <input type="checkbox"/> CORPORATION STATE OF INCORPORATION
----------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

SURETY(IES) *(Name and business address)*

PENAL SUM OF BOND					BID IDENTIFICATION	
PERCENT OF BID PRICE	AMOUNT NOT TO EXCEED				BID DATE	INVITATION NO.
	MILLION(S)	THOUSAND(S)	HUNDRED(S)	CENTS	FOR <i>(Construction, Supplies, or Services)</i>	

OBLIGATION:

We, the Principal and Surety(ies) are firmly bound to the United States of America (hereinafter called the Government) in the above penal sum. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally. However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purposes, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown opposite the name of the Surety. If no limit of liability is indicated, the limit of liability is the full amount of the penal sum.

CONDITIONS:

The Principal has submitted the bid identified above.

THEREFORE:

The above obligation is void if the Principal - (a) upon acceptance by the Government of the bid identified above, within the period specified therein for acceptance (sixty (60) days if no period is specified), executes the further contractual documents and gives the bond(s) required by the terms of the bid as accepted within the time specified (ten (10) days if no period is specified) after receipt of the forms by the principal; or (b) in the event of failure to execute such further contractual documents and give such bonds, pays the Government for any cost of procuring the work which exceeds the amount of the bid.

Each Surety executing this instrument agrees that its obligation is not impaired by any extension(s) of the time for acceptance of the bid that the Principal may grant to the Government. Notice to the surety(ies) of extension(s) are waived. However, waiver of the notice applies only to extensions aggregating not more than sixty (60) calendar days in addition to the period originally allowed for acceptance of the bid.

WITNESS:

The Principal and Surety(ies) executed this bid bond and affixed their seals on the above date.

PRINCIPAL				
SIGNATURE(S)	1.	2.	3.	Corporate Seal
	<i>(Seal)</i>	<i>(Seal)</i>	<i>(Seal)</i>	
NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.	3.	

INDIVIDUAL SURETY(IES)		
SIGNATURE(S)	1.	2.
	<i>(Seal)</i>	<i>(Seal)</i>
NAME(S) <i>(Typed)</i>	1.	2.

CORPORATE SURETY(IES)					
SURETY A	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.		

SURETY B	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY C	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY D	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY E	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY F	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY G	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		

INSTRUCTIONS

1. This form is authorized for use when a bid guaranty is required. Any deviation from this form will require the written approval of the Administrator of General Services.
2. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.
3. The bond may express penal sum as a percentage of the bid price. In these cases, the bond may state a maximum dollar limitation (e.g., (e.g., 20% of the bid price but the amount not to exceed _____ dollars).
4. (a) Corporations executing the bond as sureties must appear on the Department of the Treasury's list of approved sureties and must act within the limitation listed therein. Where more than one corporate surety is involved, their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." In the space designated "SURETY(IES)" on the face of the form, insert only the letter identification of the sureties.

(b) Where individual sureties are involved, a completed Affidavit of Individual surety (Standard Form 28), for each individual surety, shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning its financial capability.
5. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Corporate Seal"; and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.
6. Type the name and title of each person signing this bond in the space provided.
7. In its application to negotiated contracts, the terms "bid" and "bidder" shall include "proposal" and "offeror."

PART IV - REPRESENTATIONS AND INSTRUCTIONS

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND
OTHER STATEMENT OF OFFERORS

(This section will be removed from the contract document)

K.1 52.252-1 Solicitation Provisions Incorporated by Reference (Feb 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the contracting officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically via the Internet at this address: <http://www.arnet.gov/far>.

52.203-11 Certification and Disclosure Regarding Payments to Influence
Certain Federal Transactions (Apr 1991)

K.2 52.203-2 Certificate of Independent Price Determination (Apr 1985)

(a) The offeror certifies that--

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the method of factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory--

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated

and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above:

[Insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

K.3 52.204-3 Taxpayer Identification (Oct 1998)

(a) Definitions.

Common parent, as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

Taxpayer Identification Number (TIN), as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and

3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

- " TIN: _____
- " TIN has been applied for.
- " TIN is not required because:
- " Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;
- " Offeror is an agency or instrumentality of a foreign government;
- " Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

- " Sole proprietorship;
 - " Partnership;
 - " Corporate entity (not tax-exempt);
 - " Corporate entity (tax-exempt);
 - " Government entity (Federal, State, or local);
 - " Foreign government;
 - " International organization per 26 CFR 1.6049-4;
 - " Other
-

(f) Common parent.

- " Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.
- " Name and TIN of common parent:
- Name _____
- TIN _____

K.4 52.204-5 Women-owned Business (Other than Small Business) (May 1999)

(a) Definition. "Women-owned business concern," as used in this provision, means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Representation. *[Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representations, of this solicitation.]* The offeror represents that it () is a women-owned business concern.

K.5 52.209-5 Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters (Apr 2001)

(a) (1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are () are not () presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have () have not (), within a 3-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are () are not () presently indicted for, or otherwise criminally or civilly charged by a governmental entity with commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has () has not (), within a 3-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory

responsibilities within a business entity (e.g., general manager, plant manager, head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

K.6 52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (MAR 2001)
ALTERNATE I (OCT 2000)

(a) (1) The North American Industry Classification System (NAICS) code for this acquisition is **332911**.

(2) The small business size standard is **500** average employees employed by an offeror in the preceding 12 months.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it () is, () is not a small business concern.

(2) *(Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.)* The offeror represents, for general statistical purposes, that it () is, () is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) *(Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.)* The offeror represents as part of its offer that it () is, () is not a women-owned small business concern.

(4) *[Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.]* The offeror represents as part of its offer that it [] is, [] is not a veteran-owned small business concern.

(5) *[Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.]* The offeror represents as part of its offer that it [] is, [] is not a service-disabled veteran-owned small business concern.

(6) *(Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.)* The offeror represents, as part of its offer that—

(i) It [] is, [] is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR Part 126; and

(ii) It is, it is not a joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: _____.] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(c) Definitions.

“Service-disabled veteran-owned small business concern”--

(1) Means a small business concern—

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran as defined in 38 U.S.C. 101(2), with a disability that is service connected, as defined in 38 U.S.C. 101(16).

“Small business concern,” as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

“Veteran-owned small business concern” means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined in 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

“Women-owned small business concern,” as used in this provision, means a small business concern--

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice. (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or woman-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

- (i) Be punished by imposition of fine, imprisonment, or both;
- and
- (ii) Be subject to administrative remedies, including suspension and debarment;
- (iii) Be ineligible for participation in programs conducted under the authority of the Act.

K.7 52.219-19 Small Business Concern Representation for the Small Business Competitiveness Demonstration Program (Oct 2000)

(a) Definition. "Emerging Small Business" as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the North American Industry Classification System (NAICS) code assigned to a contracting opportunity.

(b) *[Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.]* The Offeror " is, " is not an emerging small business.

(c) *[Complete only if the Offeror is a small business or an emerging small business, indicating its size range.]* Offeror's number of employees for the past 12 months *[check this column if size standard stated in solicitation is expressed in terms of number of employees]* or Offeror's average annual gross revenue for the last 3 fiscal years *[check this column if size standard stated in solicitation is expressed in terms of annual receipts]*. *[Check one of the following.]*

No. of Employees	Avg. Annual Gross Revenues
___ 50 or fewer	___ \$1 million or less
___ 51 - 100	___ \$1,000,001 - \$2 million
___ 101 - 250	___ \$2,000,002 - \$3.5 million
___ 251 - 500	___ \$3,500,001 - \$5 million
___ 501 - 750	___ \$5,000,001 - \$10 million
___ 751 - 1,000	___ \$10,000,001 - \$17 million
___ Over 1,000	___ Over \$17 million

K.8 52.219-22 SMALL DISADVANTAGED BUSINESS STATUS (OCT 1999) ALTERNATE I (OCT 1998)

(a) General. This provision is used to assess an offeror's small disadvantaged business status for the purpose of obtaining a benefit on this solicitation. Status as a small business and status as a small disadvantaged business for general statistical purposes is covered by the provision at FAR 52.219-1, Small Business Program Representation.

(b) Representations.

(1) General. The offeror represents, as part of its offer, that it is a small business under the size standard applicable to this acquisition; and either--

[] (i) It has received certification by the Small Business Administration as a small disadvantaged business concern consistent with 13 CFR 124, Subpart B; and

(A) No material change in disadvantaged ownership and control has occurred since its certification;

(B) Where the concern is owned by one or more disadvantaged individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(C) It is identified, on the date of its representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net); or

[] (ii) It has submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(2) [] For Joint Ventures. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements at 13 CFR 124.1002(f) and that the representation in paragraph (b)(1) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. [The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: _____.]

(3) Address. The offeror represents that its address [] is, [] is not in a region for which a small disadvantaged business procurement mechanism is authorized and its address has not changed since its certification as a small disadvantaged business concern or submission of its application for certification. The list of authorized small disadvantaged business procurement mechanisms and regions is posted at <http://www.arnet.gov/References/sdbadjustments.htm>. The offeror shall use the list in effect on the date of this solicitation. "Address," as used in this

provision, means the address of the offeror as listed on the Small Business Administration's register of small disadvantaged business concerns or the address on the completed application that the concern has submitted to the Small Business Administration or a Private Certifier in accordance with 13 CFR part 124, subpart B. For joint ventures, "address" refers to the address of the small disadvantaged business concern that is participating in the joint venture.

(c) Penalties and Remedies. Anyone who misrepresents any aspects of the disadvantaged status of a concern for the purposes of securing a contract or subcontract shall:

- (1) Be punished by imposition of a fine, imprisonment, or both;
- (2) Be subject to administrative remedies, including suspension and debarment; and
- (3) Be ineligible for participation in programs conducted under the authority of the Small Business Act.

K.9WBR 1452.209-900 Bidder Responsibility Data--Bureau of Reclamation--Lower Colorado Region (Nov 1996)

(a) To assist the Contracting Officer in making an affirmative determination of responsibility pursuant to Federal Acquisition Regulation, Part 9, each bidder shall provide a list of all Government and commercial contracts performed during the past year. If additional space is required, the list may be continued on a plain piece of paper which shall be properly identified and attached to the bid submittal documents.

CUSTOMER	CONTACT POINT & PHONE NUMBER	CONTRACT NUMBER	CONTRACT AMOUNT	EST/ACTUAL COMPLETION DATE

CUSTOMER	CONTACT POINT & PHONE NUMBER	CONTRACT NUMBER	CONTRACT AMOUNT	EST/ACTUAL COMPLETION DATE

Small business concern,” as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

“Women-owned small business concern,” as used in this provision, means a small business concern—

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice. (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, small disadvantaged, or woman-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment;
and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

K.10 52.222-22 Previous Contracts and Compliance Reports (Feb 1999)

The offeror represents that--

(a) It ☐ has, ☐ has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) It ☐ has, ☐ has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

K.11 52.223-13 Certification of Toxic Chemical Release Reporting (Oct 1996)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)

☐ (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

☐ (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

[] (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

[] (iv) The facility does not fall within Standard Industrial Classification Code (SIC) designations 20 through 39 as set forth in Section 19.102 of the Federal Acquisition Regulation; or

[] (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

K.12 WBR 1452.225-903 Offers Based on Foreign Construction Materials--Bureau of Reclamation--Lower Colorado Region (Nov 1996)

(a) Any offer based on the use of one or more foreign construction materials shall include data, in the format listed in paragraph (b) below, clearly demonstrating that the cost of each foreign construction material, plus 6 percent, is less than the cost of each comparable domestic construction material. The cost of construction material shall be computed by including all delivery costs of the construction material, and any applicable duty whether or not a duty-free entry certificate may be issued.

(b) For evaluation purposes under paragraph (a) above, the following information shall be included in the offer for the use of one or more foreign construction materials:

FOREIGN AND DOMESTIC CONSTRUCTION MATERIALS COST COMPARISON

Construction Material Description	Unit	Quantity	Cost including all delivery costs to construction site ¹ (dollars)
Item 1. (a) Foreign Construction Material:			\$ _____
(b) Comparable domestic construction material:			\$ _____
Item 2. (a) Foreign construction material:			\$ _____
(b) Comparable domestic construction material: ²			\$ _____

Include applicable duty for foreign material.

² If additional materials are offered, continue on a separate page containing the same format.

SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS
(This section will be removed from the contract document)

L.1 52.252-1 Solicitation Provisions Incorporated by Reference (Feb 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the contracting officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically via the Internet at this address: <http://www.arnet.gov/far>.

52.204-6	Data Universal Numbering System (DUNS) Number (Jun 1999)
52.214-34	Submission of Offers in the English Language (Apr 1991)
52.214-35	Submission of Offers in U.S. Currency (Apr 1991)
52.215-1	Instructions to Offerors--Competitive Acquisition (Feb 2000)
52.217-5	Evaluation of Options (Jul 1990)
52.236-28	Preparation of Proposals-Construction (Oct 1997)
WBR 1452.211-80	Notice of Intent to Acquire Metric Products and Services--Bureau of Reclamation (Mar 1993)

L.2 52.211-1 Availability of Specifications Listed in the GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29 (Aug 1998)

(a) The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29, and copies of specifications, standards, and commercial Item Descriptions cited in this solicitation may be obtained for a fee by submitting a request to--

GSA Federal Supply Service
Specifications Section, Suite 8100
470 East L'Enfant Plaza, SW
Washington, DC 20407
Tel. 202-619-8925
Facsimile 202-619-8978
Internet: <http://pub.fss.gsa.gov/pub/fed-specs.html>

(b) If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by

submitting a request to the addressee in paragraph (a) of this provision. Additional copies will be issued for a fee.

L.3 52.211-3 Availability of Specifications Not Listed in the GSA Index of Federal Specifications, Standards and Commercial Item Descriptions (Jun 1988)

(a) Information on standards which are identified in the specifications by dual acronyms, for example, ANSI/ASTM, indicating the American National Standards Institute and sponsorship by the American Society for Testing Materials or other sponsoring organization, may be obtained from the appropriate sponsoring organization.

(b) For various manuals and standard specifications printed, reprinted, or published while the Bureau of Reclamation was officially named Water and Power Resources Service. All references to Water and Power Resources Service or any form derivative thereof herein shall be considered synonymous with the Bureau of Reclamation. The address in (c) below may also be used to order the various manuals and standard specifications printed, reprinted, or published while the Bureau of Reclamation was officially named the Water and Power Resources Service.

(c) The specifications cited in this solicitation may be obtained from one or more of the addresses listed below.

ACRONYM	TITLE	ADDRESS	PHONE NOS.
ANSI	American National Standards Institute	11 West 42nd Street New York NY 10036 www.ansi.org	(212) 642-4900 Fax: (212) 398-0023
ASTM	American Society for Testing and Materials	100 Barr Harbor Drive West Conshohocken PA 19428-2959 www.astm.org	(610) 832-9585 Fax: (610) 832-9555
NACE	National Association of Corrosion Engineers	1440 South Creek Drive Houston TX 77084	(281) 228-6200 Fax: (281) 228-6329
SSPC	The Society for Protective Coatings	40 24th Street, 6th Floor Pittsburgh PA 15222-4656 www.sspc.org	(412) 281-2331 Fax: (412) 281-9992
	Bureau of Reclamation ¹	P.O. Box 25007, Attn: D-8170 Denver CO 80225	303-445-3082

¹ Reclamation Standard Specifications

(d) Copies of many of the Federal Specifications and Standards may be examined at the office of the Bureau of Reclamation, Denver Office, Building 67, Denver Federal Center, West 6th Avenue and Kipling Street, Denver, Colorado.

OTHER RECLAMATION PUBLICATIONS - Reclamation manuals and significant scientific, technical, and engineering works are available from the National Technical Information Service (NTIS). United States Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield VA 22161. Telephone: (703) 487-4650 or 1-800-553-6847

Department of the Army, U.S. Army Corps of Engineers Publications Depot, 2803 52nd Avenue, Hyattsville MD 20781-1102. Tel: 301/436-2063

Department of Commerce, Standards Management Program, Office of Standards Services, National Institute for Standards and Technology, Gaithersburg MD 20899. Tel: 301/975-4025

Defense Printing Service Detachment Office, Building 4, Section D, 700 Robins Avenue, Philadelphia PA 19111-5094. Tel: 215/697-2179

Department of Transportation, Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402-9371. Tel: 202/783-3238

NBS - National Bureau of Standards, National Technical Information Service, 5285 Port Royal Road, Springfield VA 22161. Tel: 703/487-4650

L.4 52.222-23 Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity for Construction (Feb 1999)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION FOR EACH TRADE	GOALS FOR FEMALE PARTICIPATION FOR EACH TRADE
	6.9% (all counties)

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistance Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the--

- (1) Name, address, and telephone number of the subcontractor;
 - (i) Employer identification number of the subcontractor;
- (2) Estimated dollar amount of the subcontract;
- (3) Estimated starting and completion dates of the subcontract; and
- (4) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Hoover Dam is located on the Colorado River approximately 8 miles, via U.S. Highway 93, northeast of Boulder City, Nevada, in Clark County, Nevada, and Mojave County, Arizona.

L.5 1452.215-71 Use And Disclosure of Proposal Information--Department of the Interior (Apr 1984)

(a) Definitions. For the purposes of this provision and the Freedom of Information Act (5 U.S.C. 552), the following terms shall have the meaning set forth below:

(1) "Trade Secret" means an unpatented, secret, commercially valuable plan, appliance, formula, or process, which is used for making, preparing, compounding, treating or processing articles or materials which are trade commodities.

(2) "Confidential commercial or financial information" means any business information (other than trade secrets) which is exempt from the mandatory disclosure requirement of the

Freedom of Information Act, 5 U.S.C. 552. Exemptions from mandatory disclosure which may be applicable to business information contained in proposals include exemption (4), which covers "commercial and financial information obtained from a person and privileged or confidential," and exemption (9), which covers "geological and geophysical information, including maps, concerning wells."

(b) If the offeror, or its subcontractor(s), believes that the proposal contains trade secrets or confidential commercial or financial information exempt from disclosure under the Freedom of Information Act, (5 U.S.C. 552), the cover page of each copy of the proposal shall be marked with the following legend:

"The information specifically identified on pages _____ of this proposal constitutes trade secrets or confidential commercial and financial information which the offeror believes to be exempt from disclosure under the Freedom of Information Act. The offeror requests that this information not be disclosed to the public, except as may be required by law. The offeror also requests that this information not be used in whole or part by the Government for any purpose other than to evaluate the proposal, except that if a contract is awarded to the offeror as a result of or in connection with the submission of the proposal, the Government shall have the right to use the information to the extent provided in the contract."

(c) The offeror shall also specifically identify trade secret information and confidential commercial and financial information on the pages of the proposal on which it appears and shall mark each such page with the following legend:

"This page contains trade secrets or confidential commercial and financial information which the offeror believes to be exempt from disclosure under the Freedom of Information Act and which is subject to the legend contained on the cover page of this proposal."

(d) Information in a proposal identified by an offeror as trade secret information or confidential commercial and financial information shall be used by the Government only for the purpose of evaluating the proposal, except that (i) if a contract is awarded to the offeror as a result of or in connection with submission of the proposal, the Government shall have the right to use the information as provided in the contract, and (ii) if the same information is obtained from another source without restriction it may be used without restriction.

(e) If a request under the Freedom of Information Act seeks access to information in a proposal identified as trade secret information or confidential commercial and financial information, full consideration will be given to the offeror's view that the information constitutes trade secrets or confidential commercial or financial information. The offeror will also be promptly notified of the request and given an opportunity to provide additional evidence and argument in support of its position, unless administratively unfeasible to do so. If it is determined that information claimed by the offeror to be trade secret information or confidential commercial or financial information is not exempt from disclosure under the Freedom of Information Act, the offeror will be notified of this determination prior to disclosure of the information.

(f) The Government assumes no liability for the disclosure or use of information contained in a proposal if not marked in accordance with paragraphs (b) and (c) of this provision. If a request under the Freedom of Information Act is made for information in a proposal not marked in accordance with paragraphs (b) and (c) of this provision, the offeror concerned shall be promptly notified of the request and given an opportunity to provide its position to the Government. However, failure of an offeror to mark information contained in a proposal as trade secret information or confidential commercial or financial information will be treated by the Government as evidence that the information is not exempt from disclosure under the Freedom of Information Act, absent a showing that the failure to mark was due to unusual or extenuating circumstances, such as a showing that the offeror had intended to mark, but that markings were omitted from the offeror's proposal due to clerical error.

**L.6 WBR 1452.215-80 SOURCE EVALUATION AND SELECTION PROCEDURES --
BUREAU OF RECLAMATION (SEP 2000)**

The Government intends to evaluate proposals submitted under this solicitation and select a source for contract award without discussions (unless the contracting officer later determines discussions to be necessary) in accordance with FAR 52.215-1 Instructions to Offerors - Competitive Acquisition (Feb 2000). Source selection shall be in accordance with procedures contained in FAR Part 15, Department of the Interior Acquisition Regulation (DIAR) Part 1415 (48 CFR 1415) and Bureau of Reclamation Acquisition Regulation WBR Part 1415. These procedures are summarized as follows:

(a) Technical evaluation. A Technical Proposal Evaluation Committee has been established to objectively evaluate technical proposals in accordance with the Evaluation Factors for Award -- Bureau of Reclamation provision in Part IV, Section M of this solicitation. Technical proposals shall be submitted in accordance with the Technical Proposal Instructions -- Bureau of Reclamation provision in Part IV, Section L of this solicitation.

(b) Cost or price evaluation. An objective cost or price evaluation of contract pricing proposals will be made in accordance with the Evaluation Factors for Award provision in Part IV, Section M of this solicitation. Pricing proposals shall be submitted in accordance with the Contract Pricing Proposal Instructions -- Bureau of Reclamation provision in Part IV, Section L of this solicitation. Pursuant to FAR 15.404-1, cost or price evaluation will be used to determine cost/price reasonableness and the offeror's understanding of, and ability to perform, the prospective contract.

(c) Clarifications. Clarifications are limited exchanges, between the Government and offerors, that may occur when award without discussions is contemplated. If award will be made without conducting discussions, offerors may be given the opportunity to clarify certain aspects of proposals (e.g., the relevance of an offeror's past performance information and adverse past performance information to which the offeror has not previously had an opportunity to respond) or to resolve minor or clerical errors.

(d) Communications. Communications are exchanges, between the Government and offerors, after receipt of proposals, leading to establishment of the competitive range. Communications may be conducted to enhance Government understanding of proposals, allow reasonable interpretation of the proposal, or facilitate the Government's evaluation process. Such communications may not be used to cure proposal deficiencies or material omissions, materially alter the technical or cost elements of the proposal, and/or otherwise revise the proposal. Communications are for the purpose of addressing issues that must be explored to determine whether a proposal should be placed in the competitive range. They shall not provide an opportunity for the offeror to revise its proposal, but may address ambiguities in the proposal or other concerns and information relating to past performance.

(e) Competitive range. If discussions are to be conducted, the contracting officer shall establish the competitive range based on the ratings of each proposal against all evaluation criteria. The competitive range shall comprise all the most highly rated proposals, unless the range is further reduced for purposes of efficiency. The contracting officer may determine that the number of most highly rated proposals that might otherwise be included in the competitive range exceeds the number at which an efficient competition can be conducted. The contracting officer may then limit the number of proposals in the range to the greatest number that will permit an efficient competition among the most highly rated proposals. If, after discussions have begun (see paragraph (g) below), an offeror originally in the competitive range is no longer considered to be among the most highly rated offerors being considered for award, that offeror may be eliminated from the range whether or not all material aspects of the proposal have been discussed, or whether or not the offeror has been afforded an opportunity to submit a proposal revision.

(f) Preaward debriefing of offerors. Offerors excluded from the competitive range or otherwise excluded from further consideration prior to the final source selection decision may request a debriefing before award. The process for requesting and conducting preaward debriefings may be found at FAR 15.505.

(g) Discussions. Discussions are exchanges between the Government and offerors, after establishment of the competitive range, that are undertaken with the intent of allowing the offeror to revise its proposal. These discussions may include bargaining, including persuasion, alteration of assumptions and positions, give-and-take, and may apply to price, schedule, technical requirements, type of contract, or other terms of a proposed contract. Discussions are tailored to each offeror's proposal, and shall be conducted by the contracting officer with each offeror within the competitive range. The primary objective of discussions is to maximize the Government's ability to obtain best value, based on the requirement and the evaluation factors set forth in the solicitation.

(h) Proposal revisions. The contracting officer may request or allow proposal revisions to clarify and document understandings reached during negotiations. At the conclusion of discussions, each offeror in the competitive range shall be given an opportunity to submit a final proposal revision. The contracting officer is required to establish a common cut-off date only for receipt of final proposal revisions. Requests for final proposal revisions shall advise offerors that

the final proposal revisions shall be in writing and that the Government intends to make award without obtaining further revisions.

(i) Preaward survey. A Government survey activity may contact an offeror, or visit its facility, to obtain information for determining its financial resources and/or its technical capabilities to perform the work when available information is not sufficient for the Contracting Officer to make a determination regarding contractor responsibility as required by FAR Subpart 9.1. Current financial statements and other information required to make this determination shall be made available to the survey activity. Information provided shall be protected from release or disclosure outside the Government, except as provided in FAR Subpart 24.2, Freedom of Information Act.

(j) Organizational conflicts of interest. Award will not be made to an apparent successful offeror when an organizational conflict of interest is determined to exist and cannot be avoided or mitigated, unless the Contracting Officer determines that award is in the best interest of the United States and a waiver is obtained pursuant to DIAR 1409.503 (48 CFR 1409.503).

(k) Source selection decision. The source selection authority's (SSA) decision shall be based on a comparative assessment of proposals against all source selection criteria in the solicitation. While the SSA may use reports and criteria prepared by others, the source selection decision shall represent the SSA's independent judgment. The source selection decision shall be documented, and the documentation shall include the rationale for any business judgments and tradeoffs made or relied on by the SSA, including benefits associated with additional costs. Although the rationale for the selection decision must be documented, that documentation need not quantify the tradeoffs that led to the decision.

(l) Postaward notice. After contract award, unsuccessful offerors will be provided with written notice regarding contract award (including the information listed in FAR 15.503(b)) by the Contracting Officer. Offerors receiving prior notice of exclusion from the competitive range under paragraph (f) of this provision will not receive this notice.

(m) Postaward debriefing of offerors. An offeror shall be debriefed and furnished the basis for the source selection decision and contract award if its written request is received by the contracting officer within three days after the offeror receives notice of contract award. The process for requesting and conducting postaward debriefings may be found at FAR 15.506.

L.7 WBR 1452.215-81 General Proposal Instructions--Bureau of Reclamation (Jan 1998)

In addition to the requirements of the Instructions to Offerors--Competitive Acquisition provision of this solicitation, each offeror shall submit a proposal in accordance with the instructions contained in this provision.

(a) General contents. Each proposal shall:

- (1) Be specific and complete in every detail;
- (2) Conform to all solicitation provisions, clauses, or other requirements;
- (3) Be logically assembled, practical, legible, clear, concise, coherent; and indexed (cross-indexed, where appropriate); and
- (4) Contain appropriately numbered pages of each volume or part.

(b) Arrangement of Proposal. The proposal shall consist of three (3) physically separated volumes, individually entitled as stated below. The required number of copies for each volume are shown below:

Volume	Title	Copies Required
I	Executed Section A of the solicitation and Representations, Certifications, and Other Statements of Offerors	1
II	Technical Proposal	4
III	Pricing Proposal	2

(c) Separation of volumes. All copies of each proposal volume (i.e., all copies of Volume I) are to be packaged individually and clearly marked to identify contents. The exterior of each package containing proposals shall be marked with the solicitation number, and the time and date for receipt of proposals and the name and address of the offeror, in order to prevent mishandling.

(d) Representations, certifications, and other offeror statements (Volume I). Volume I shall incorporate the other Volumes by reference, but shall not physically include them. It shall consist of:

- (1) A fully executed Solicitation, Offer, and Award form required by Part I, Section A of this solicitation. It shall be used as the cover sheet (or first page) of each copy of Volume I;
- (2) Fully executed and completed offeror representations, certifications, and acknowledgments required by Part IV, Section K of this solicitation;
- (3) Additional information required by the solicitation to be furnished by the offeror which is not required to be obtained in another volume of the proposal;
- (4) Make or Buy Program (if applicable); any waivers of any solicitation provisions or contract clauses; and

(6) A summary of any exemptions from, or deviations to, any other solicitation requirements.

(e) Technical Proposal (Volume II). See the requirements contained in the Technical Proposal Instructions--Bureau of Reclamation provision of the solicitation.

(f) Pricing Proposal (Volume III). See the requirements contained in the Pricing Proposal Instructions--Bureau of Reclamation provision of the solicitation. Offerors are hereby notified that even if cost or pricing data are not initially requested in this solicitation, the Contracting Officer reserves the right to request such data if they are later found necessary pursuant to FAR 15.403-5(a)(1).

L.8 WBR 1452.215-82 TECHNICAL PROPOSAL INSTRUCTIONS -- BUREAU OF RECLAMATION (JAN 1998) ALTERNATE I (APR 2001)

(a) General. The technical proposal shall be identified as Volume II of the offeror's proposal and shall be an orderly, specific, and complete document in every detail. It should be presented in a manner which allows it to "stand alone" without the need to reference other documents. It should convincingly describe the capability of the offeror's organization to participate in this project and effectively demonstrate a thorough understanding of the work statement contained in Part I, Section C of this solicitation. The proposal shall be organized and written so that it can be easily read and meaningfully evaluated by Reclamation personnel from a variety of different functional and technical disciplines. It should be a coherent document free of internal inconsistencies as well as inconsistencies with other volumes of the proposal.

(b) Use and Disclosure of Proposal Information. In accordance with the Use and Disclosure of Proposal Information -- Department of the Interior provision of this solicitation, offerors shall mark trade secret or confidential commercial or financial information contained in the proposal with the restrictive legends specified. The offeror shall also clearly and separately mark all proprietary information (as defined in FAR 3.104-3) contained in the proposal with the restrictive legend "Proprietary Information."

(c) Format and Content. To assist in the uniform evaluation of proposals, the following format shall be utilized in preparing the technical proposal:

(1) Table of contents. The Table of Contents shall list all sections of the technical proposal. Any future amendments, additions and/or revisions to the proposal shall be included in an updated Table of Contents;

(2) Index. The index shall cross reference the work statement to the terms of the proposal and indicate how the proposal conforms to the evaluation factors contained in Part IV, Section M;

(3) Enclosures. The enclosures shall include a list of any tables, drawings, charts, and any other enclosures which summarize data or information;

(4) Executive summary. The Executive Summary shall include a brief discussion of how the required work will be performed and important highlights of the proposal.

(5) Technical approach proposed to accomplish the work statement. The discussion of the technical approach shall:

(i) Contain detailed explanations of proposed approaches to performing and accomplishing the work, including preliminary design and other information indicating configuration and functions of components as applicable, and a specific outline of the actual tasks proposed to be performed in order to complete the work. Repeating the work statement without elaborating on the specific tasks to be performed is unacceptable;

(6) The discussion of the offeror's experience, key personnel and past performance shall:

(i) Contain evidence of the specific personnel to be assigned to perform the requirements contained in the work statement including any additional personnel required for full employment, subcontract, or consultation and the source from which they will be obtained;

(ii) Provide a list of projects similar in scope and magnitude to the work required under this solicitation which the offeror has completed during the last 3 years. For each project, include:

(A) Name of the project;

(B) Description of the work;

(C) Contract number, date and type;

(D) Name and address of the acquiring Government agency or commercial customer;

(E) Initial contract amount and final contract amount;

(F) Any problems encountered in performance of the work and corrective action(s) taken; and

(G) Name(s) and telephone number(s) of references from the acquiring agency or customer who may be contacted for further information.

If there is no relevant past performance or no information regarding past performance available, they must confirm this in writing and provide a written explanation of the reasons/circumstances of why there is none or it is not available. Offerors not providing the written confirmation will not receive the neutral rating.

(d) Cost/Price Information. To permit objective evaluation of the technical proposal, no cost or price information shall be included in the technical proposal.

(e) Offerors must provide the following information in sufficient detail to allow proper evaluation and rating of the Small Business evaluation factor of this solicitation. If firm commitments to subcontract exist, list the subcontractors by name. Otherwise, list the type of services to be subcontracted.

(1) Participation of small business in the performance of this project:

LARGE BUSINESS OFFERORS

(i) Identify, in terms of dollar value and percentage of total proposed price, the extent of work you will perform as the prime contractor.

(ii) Submit with your proposal a subcontracting plan for this project.

SMALL BUSINESS OFFERORS

(i) Identify, in terms of dollar value and percentage of total proposed price, the extent of work you will perform as the prime contractor.

(ii) State the extent of work you plan to subcontract to large business, Small Business (SB), Small Disadvantaged Business (SDB), Women-Owned Small Business (WOSB), HUBZone Small Business (HUBZone), and Veteran-Owned Small Business (VOSB).

JOINT VENTURES-TEAMING ARRANGEMENTS

(i) If you are submitting an offer as a joint venture or a teaming arrangement, identify, for each member of your joint venture or team, whether the member is a large business, SB, SDB, WOSB, HUBZone, or VOSB; and the dollar value of the work to be performed by each member of your joint venture or team.

(ii) The Government will evaluate your joint venture or team as either a large business or small business based upon the information provided in subparagraph (i) directly above.

(2) Past performance in utilizing SB, SDB, WOSB, HUBZone, and VOSB in previous contracts:

LARGE BUSINESS OFFERORS

(i) Provide information on any awards you received within the past three years for outstanding support to SB, SDB, WOSB, HUBZone, and VOSB.

(ii) Provide final SF 294s, Subcontracting Report for Individual Contracts, on your three most recently completed contracts, or any other documentation showing compliance with the utilization of SB, SDB, WOSB, HUBZone, and VOSB requirements of those contracts.

Include the dollar value percentage of work (of total contract value) subcontracted to large business, SB, SDB, WOSB, HUBZone, and VOSB for each.

(iii) Provide performance evaluation ratings obtained on implementation of subcontracting plans for three recently completed contracts.

SMALL BUSINESS OFFERORS

(i) Provide information on any awards you received within the past three years for outstanding support to SB, SDB, WOSB, HUBZone, and VOSB.

(ii) Provide a list of your three most recently completed contracts. Include the dollar value percentage of work (of total contract value) subcontracted to large business, SB, SDB, WOSB, HUBZone, and VOSB firms.

L.9 WBR 1452.215-83 Pricing Proposal Instructions--Bureau of Reclamation (Jan 1998)

(a) General. The pricing proposal shall be identified as Volume III of the offeror's proposal and shall be an orderly, specific, and complete document in every detail. It should be a coherent document free of internal inconsistencies and should be consistent with the technical approach(es) proposed in the technical proposal (Volume II). Offerors are hereby notified that even though cost or pricing data are not initially requested in this solicitation, the Contracting Officer reserves the right to request such data if they are later found necessary pursuant to FAR 15.403-5(a)(1).

(b) Use and Disclosure of Proposal Information. In accordance with the Use and Disclosure of Proposal Information--Department of the Interior provision of this solicitation, offerors shall mark trade secret or confidential commercial or financial information contained in the proposal with the restrictive legends specified. The offeror shall also clearly and separately mark all proprietary information (as defined in FAR 3.104-3 contained in the proposal with the restrictive legend "Proprietary Information."

(c) Format and Content. To assist in the uniform evaluation of proposals, the following format shall be utilized in preparing the pricing proposal:

(1) Table of contents. The Table of Contents shall list all sections of the pricing proposal. Any modifications or revisions to the proposal, up to the date of agreement on price, shall include an updated Table of Contents;

(2) Index. The index shall cross reference the work statement to the terms of the proposal and indicate how the proposal conforms to the evaluation factors contained in Part IV, Section M of this solicitation;

(3) Enclosures. A list shall be included of all enclosures, attachments, tables, drawings, charts, and any other material which summarize data or information contained or referenced in the pricing proposal.

(4) Pricing proposal breakdown. The offeror shall submit Section B of the contract Schedule (Part I of this solicitation) with its proposed total prices/costs for each contract line item (including any options) and proposed unit price(s), if required. In addition, a total proposed price consisting of the sum of all contract line items (excluding options) shall be submitted. Offerors are hereby notified that even though additional data to support proposed prices are not initially requested in this solicitation, the Contracting Officer reserves the right to request such data if they are later found necessary.

(d) Cost Information in Other Volumes. No cost information shall be included in any other volume of a proposal unless required by paragraph (d) of the Technical Proposal Instructions -- Bureau of Reclamation provision of this solicitation.

(e) Page Numbering. All pages in the cost proposal should be consecutively numbered (including pages with tables and exhibits). The offeror shall clearly identify all exhibits and supporting information.

(f) Rounding of Costs. All price or cost amounts proposed shall be expressed to the nearest whole dollar except for individual hourly labor rates (if required). All percentages shall be expressed to one decimal place.

L.10 1452.215-914 Period for Acceptance of Offer--Bureau of Reclamation--Lower Colorado Region (Mar 2000)

Initial proposals in response to this solicitation will be valid for 60 calendar days, if award is made without discussion. If negotiations are conducted, the 60 calendar day offer acceptance period (unless a different period is inserted by the offeror) shall apply to the final proposal revision and shall commence on the due date for receipt of final proposal revisions.

L.11 52.216-1 Type of Contract (Apr 1984)

The Government contemplates award of a firm fixed-price contract resulting from this solicitation.

L.12 52.225-10 Notice of Buy American Act/Balance of Payments Program Requirement--Construction Materials (Feb 2000)

(a) Definitions. Construction material, domestic construction material, and foreign construction material, as used in this provision, are defined in the clause of this solicitation entitled "Buy

American Act--Balance of Payments Program--Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act or Balance of Payments Program should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act or Balance of Payments Program before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act or Balance of Payments Program, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers. (1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

- (i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or
- (ii) May be accepted if revised during negotiations.

L.13 52.233-2 Service of Protest (Aug 1996) Department of the Interior (Jul 1996)
(Deviation)

(a) Protests as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from: Contracting Officer, Bureau of Reclamation, P.O. Box 61470, Boulder City NV 89006-1470.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(c) A copy of the protest served on the Contracting Officer shall be simultaneously furnished by the protester to the Department of Interior Assistant Solicitor for Procurement and Patents, 1849 C Street, NW, Room 6511, Washington, D.C. 20240.

L.14 WBR 1452.233-80 Agency Procurement Protests--Bureau of Reclamation (Sep 1997)

(a) Executive Order 12979, Agency Procurement Protests, establishes policy on agency procurement protests. This policy is implemented at section 33.103 of the Federal Acquisition Regulation. For solicitations issued by the Bureau of Reclamation, an interested party may request independent review of its protest by the Bureau Procurement Chief.

(b) This independent review is available as an alternative to consideration by the contracting officer or as an appeal of the contracting officer's decision on a protest. An interested party may:

(1) Protest to the contracting officer;

(2) Protest directly to the Bureau Procurement Chief, without first protesting to the contracting officer; or

(3) Appeal a contracting officer's decision to the Bureau Procurement Chief.

(c) An appeal of the contracting officer's decision must be received by the Bureau Procurement Chief (Bureau of Reclamation, Denver Federal Center, Bldg. 67, P.O. Box 25007 (D-7800), Denver, CO 80225-25007) no later than 3 days after receipt of that decision by the interested party. The Bureau Procurement Chief shall render a decision no later than 5 days after receipt of an appeal.

(d) If there is an appellate review of the contracting officer's decision by the Bureau Procurement Chief, it will not extend the General Accounting Officer's timeliness requirements. Therefore, any subsequent protest to the GAO must be filed within 10 days of knowledge of initial adverse agency action (4 CFR 21.2(a)(3)).

L.15 WBR 1452.233-82 Notice of Proposed Partnering--Bureau of Reclamation (May 1994)

Reclamation policy is to try to resolve all contractual issues in controversy by mutual agreement through the use of an appropriate alternative disputes resolution process. Thus to most effectively complete the work required under the future contract, the Bureau of Reclamation proposes to mutually form a voluntary Partnering arrangement with the Contractor. This bilateral relationship would strive for mutual trust, dedication to common goals, and an understanding of each other's individual expectations and values. The expected benefits would include improved efficiency, cost effectiveness and innovation between all parties to ensure a quality deliverable that is completed on time and within budget. Any cost associated with implementing this Partnering arrangement will be agreed to by both parties and will be shared equally, with no change in contract price. Additional information on Partnering and suggested implementation procedures are contained in the Bureau of Reclamation "Partnering" guide book, that is available from the contracting officer.

L.16 52.236-27 Site Visit (Construction) (Feb 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged to inspect the site where the work will be performed.

(b) Site visits may be arranged during normal duty hours by contacting:

Name:	Mr. Chuck Wiley
Address:	P.O. Box 60400 (Attn: LCD-2100) Boulder City NV 89006-0400
Telephone:	(702) 293-8314
Fax:	(702) 293-8319

L.17 WBR 1452.236-85 INSTRUCTION FOR MOBILIZATION AND PREPARATORY WORK SCHEDULE LINE ITEM -- BUREAU OF RECLAMATION (MAY 2000)

The Contracting Officer estimates that the Section B Mobilization and Preparatory Work schedule line item should not exceed five percent of the total bid price. Your attention is directed to contract clause WBR 1452.232-81 Payment for Mobilization and Preparatory Work, which reflects how the Government will pay for this line item, including how payment will be made when the price bid for this schedule line item is higher than the percentage stated herein.

L.18 52.252-5 Authorized Deviations in Provisions (Apr 1984)

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any Department of Interior Acquisition Regulation (48 CFR Chapter 14) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

SECTION M - EVALUATION FACTORS FOR AWARD
(This section will be removed from the contract document)

M.1 Solicitation Provisions Incorporated by Reference

The following provision is incorporated into this solicitation by reference. See provision 52.252-1, Solicitation Provisions Incorporated by Reference, for additional information.

1452.225-82 Notice of Trade Agreements Act Evaluations--Bureau of Reclamation
(Jun 2000)

M.2 WBR 1452.214-909 BASIS FOR AWARD-OPTIONS--BUREAU OF RECLAMATION-
LOWER COLORADO REGION (JUN 2001)

(a) The Government will evaluate price based upon the total price bid for Schedules A and B (See Section B). Since Schedule B represents an option, a contract will be awarded for Schedule A only. The Contracting Officer may unilaterally exercise the Option under Schedule B, under the terms and conditions prescribed elsewhere in the contract

M.3 WBR 1452.215-87 EVALUATION FACTORS FOR AWARD -- QUALITY AND
COST/PRICE APPROXIMATELY EQUAL-BUREAU OF RECLAMATION (APR 2001)
ALTERNATE I (APR 2001)

(a) Award will be made to the responsible offeror submitting a proposal which conforms to the solicitation and is most advantageous to the Government considering the factors and any significant subfactors listed in this provision.

(b) In the evaluation of proposals, all evaluation factors other than cost or price (listed in this provision), when combined, are considered to be approximately equal to cost or price. The relative importance to be placed on the evaluation factors in relation to each other is contained in paragraph (e) of this provision. If a proposal is determined by the Contracting Officer to be "technically unacceptable" as a result of evaluating all factors other than cost or price, the proposal may be rejected from further consideration. The Contracting Officer reserves the right to make award to either a lower cost/price, lower-scored offeror or a higher-rated, higher-cost/price offeror based on a rational tradeoff between evaluation factors other than cost or price and cost or price.

(c) Pursuant to FAR 15.305, a cost or price evaluation may be performed to determine the reasonableness of costs/prices proposed and the offeror's understanding of, and ability to perform, the prospective contract.

(d) The following factors and significant subfactors (if listed) will be considered in evaluating proposals and making the source selection:

(1) The offeror's technical approach proposed to accomplish the work statement. Higher ratings will be given to those proposals demonstrating soundness of approach, compliance with requirements and understanding the requirements.

(2) The offeror's experience and key personnel [may include experience of proposed subcontractor(s)] over the three years in performing projects which are similar to the work required to be performed under this solicitation.

(3) The offeror's past performance. The offeror's past performance over the last three years in performing projects which are similar to the work required to be performed under this solicitation will be evaluated. The offeror's past performance will be evaluated by reviewing past performance information for projects performed by the offeror, including predecessor companies, key personnel, or subcontractors. ~~Offerors with no relevant past performance history or for whom past performance information is not available will receive scores of 50 percent of the evaluation weight for past performance.~~ Offerors with no relevant past performance history or for whom no information regarding past performance is available, must confirm this in writing and provide a written explanation of the reasons/circumstances of why there is none or it is not available. Offerors not providing the written confirmation will not receive 50 percent of the evaluation weight.

(4) Offeror's total price.

(5) Offeror's small business subcontracting plan. Utilization of Small Business Concerns for Subcontracting Opportunities will be evaluated.

1. SMALL BUSINESS - Commitments to Small Business (SB), Small Disadvantaged Business (SDB), Women-Owned Small Business (WOSB), HUBZone Small Business (HUBZone), and Veteran-Owned Small Business (VOSB).

(a) The contracting officer has determined the following minimum subcontracting goals (percentages of total planned subcontracting dollars) for this solicitation:

- (1) SB 23%.
- (2) SDB 5%.
- (3) WOSB 5%.
- (4) HUBZone 1.5% (increasing by .5% each year to goal of 3% in 2003).
- (5) VOSB 1%.

(b) To achieve these goals, the Government will evaluate all offerors on the basis of the extent to which offerors identify and commit to utilize SB, SDB, WOSB, HUBZone, and VOSB firms as joint venture members, teaming arrangement members, or as subcontractors.

(c) Ratings. The source selection authority shall assign ratings:

EXCEPTIONAL

LARGE BUSINESS OFFERORS: Offeror demonstrates outstanding past performance in utilizing SB, SDB, WOSB, HUBZone, and VOSB. Examples of outstanding performance include but are not limited to: the offeror consistently exceeded previously established subcontracting

goals and received widely recognized awards for achievement in support of small business. The proposed plan includes extensive efforts and firm commitments in subcontracting to SB, SDB, WOSB, HUBZone, and VOSB. The proposed plan may have some minor weaknesses which are clearly offset by related strengths.

SMALL BUSINESS OFFERORS: Offeror demonstrates outstanding past performance in utilizing SB, SDB, WOSB, HUBZone, and VOSB firms. Examples of outstanding performance include but are not limited to: the offeror consistently subcontracts to SB, SDB, WOSB, HUBZone, and VOSB firms in lieu of large business concerns and received widely recognized awards for achievement in support of small business. The offeror plans extensive efforts and firm commitments to subcontract to SB, SDB, WOSB, HUBZone, and VOSB or plans to perform all of the work itself.

ACCEPTABLE

LARGE BUSINESS OFFERORS: Offeror demonstrates satisfactory past performance in utilizing SB, SDB, WOSB, HUBZone, and VOSB firms. An example of satisfactory performance is that the offeror met previously established subcontracting goals. The offeror proposes positive efforts and commitments to subcontract with SB, SDB, WOSB, HUBZone, and VOSB firms. Or, if applicable, the offeror provides a fully substantiated explanation as to why it will not subcontract to SB, SDB, WOSB, HUBZone, and VOSB firms. The proposal may have some minor weaknesses.

SMALL BUSINESS OFFERORS: Offeror demonstrates satisfactory past performance in utilizing SB, SDB, WOSB, HUBZone, and VOSB firms. An example of satisfactory performance is that the offeror subcontracts to SB, SDB, WOSB, HUBZone, and VOSB firms. The offeror proposes positive efforts and commitments to subcontract with SB, SDB, WOSB, HUBZone, and VOSB firms. Or, if applicable, the offeror provides a fully substantiated explanation as to why it will not subcontract to SB, SDB, WOSB, HUBZone, and VOSB firms.

MARGINAL

LARGE BUSINESS OFFERORS: Offeror has marginally satisfactory past performance in utilizing SB, SDB, WOSB, HUBZone, and VOSB firms. An example of marginally satisfactory performance is that the contractor did not meet some previously established small business subcontracting goals and the explanation for the failure was not substantiated. The proposed plan does not include positive efforts and commitments in subcontracting to SB, SDB, WOSB, HUBZone, and VOSB firms. And, if applicable, the offeror's explanation as to why it will not subcontract to SB, SDB, WOSB, HUBZone, and VOSB firms is not substantiated.

SMALL BUSINESS OFFERORS: Offeror has marginally satisfactory past performance in utilizing SB, SDB, WOSB, HUBZone, and VOSB firms. Of the planned subcontracting effort for this requirement, the offeror does not make positive efforts and commitments to subcontract with SB, SDB, WOSB, HUBZone, and VOSB firms. And, if applicable, the offeror's explanation as to why it will not subcontract to SB, SDB, WOSB, HUBZone, and VOSB firms is not substantiated.

UNACCEPTABLE

LARGE BUSINESS OFFERORS: Offeror has unsatisfactory past performance in utilizing SB, SDB, WOSB, HUBZone, and VOSB firms. An example of unsatisfactory performance is that the contractor failed to meet established goals and provided no explanation for the failure. The proposed plan does not include efforts and commitments in subcontracting to SB, SDB, WOSB, HUBZone, and VOSB firms. And, the offeror's explanation as to why it will not subcontract to SB, SDB, WOSB, HUBZone, and VOSB firms is not substantiated.

SMALL BUSINESS OFFERORS: Offeror has unsatisfactory past performance in utilizing SB, SDB, WOSB, HUBZone, and VOSB firms and has not provided an explanation as to why. Of the planned subcontracting effort for this requirement, the offeror does not make positive efforts and commitments to subcontract with SB, SDB, WOSB, HUBZone, and VOSB firms. And, the offeror's explanation as to why it will not subcontract to SB, SDB, WOSB, HUBZone, and VOSB firms is not substantiated.

(e) The relative importance of the factors listed in paragraph (d) of this provision is as follows:

Technical, past performance and delivery, when combined, are 55 percent of the total evaluation weight. Price comprises 45 percent of the total evaluation weight.

(1) The offeror's experience and key personnel in performing projects which are similar to the work required to be performed under this solicitation is 30 percent of the total evaluation weight.

(2) The offeror's technical approach proposed to accomplish the work statement is 15 percent of the total evaluation weight.

(3) The offeror's past performance over the last three years in performing projects which are similar to the work required to be performed is 5 percent of the total evaluation weight.

(4) The offeror's proposed total price is 45 percent of the total evaluation weight.

(5) The offeror's proposed small business subcontracting plan is 5 percent of the total evaluation weight.

M.4 WBR 1452.225-900 Evaluation of Construction Materials Under the Buy American Act--Bureau of Reclamation--Lower Colorado Region (Feb 2000)

(a) In order for offers to fully comply with the requirements of the clause at FAR 52.225-9, Buy American Act--Balance of Payments Program--Construction Materials, and to provide for proper evaluation of offers proposing use of foreign construction materials under paragraph (b) of the

provision WBR 1452.225-903, Offers Based on Foreign Construction Materials, offerors shall comply with the requirements of this provision.

(b) A construction material cannot qualify as a domestic material unless the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components.

(c) Only the construction material and its components shall be included in calculating the cost of a domestic construction material. To qualify as a component, an item must be incorporated directly into the construction material.

(d) With the exception of the circumstance identified in (e) below, any costs associated with operations necessary to incorporate a domestic component into an existing foreign construction material shall not be considered in calculating domestic component costs. Direct labor, overhead, packaging, testing, evaluation, or other related costs incurred in completing the end-product shall not be included as part of the total cost of the construction material's components. The total cost of the construction material (i.e., price minus profit) is irrelevant since total cost may include costs other than component costs.

(e) If a manufacturer which produces a component also incorporates it into the existing foreign construction material, the manufacturing costs incurred in producing the component (e.g., direct labor, overhead, packaging, testing, and evaluation) shall be included as part of the total cost of the construction material's components.

(f) In calculating the cost of a foreign or domestic component in a construction material, such cost shall include any (1) freight cost to ship the component from its manufacturing source to the point of inclusion in the construction material, (2) tariff costs, and (3) customs duty on foreign components (duty must be added whether or not a duty-free certificate is issued).

(g) If requested by the Contracting Officer, offerors shall furnish additional information to support the basis for calculating the cost of any foreign material and comparable domestic construction material furnished (see paragraph (d) of the clause entitled 1452.225-70 Use of Foreign Construction Materials--Department of the Interior).